

10.5
162
No
8680

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

VOLUME XXIV. No. 2
WHOLE NUMBER 270

GRAND RAPIDS, MICH., FEBRUARY, 1925

YEARLY SUBSCRIPTION
\$5.00; SINGLE COPY, 50c

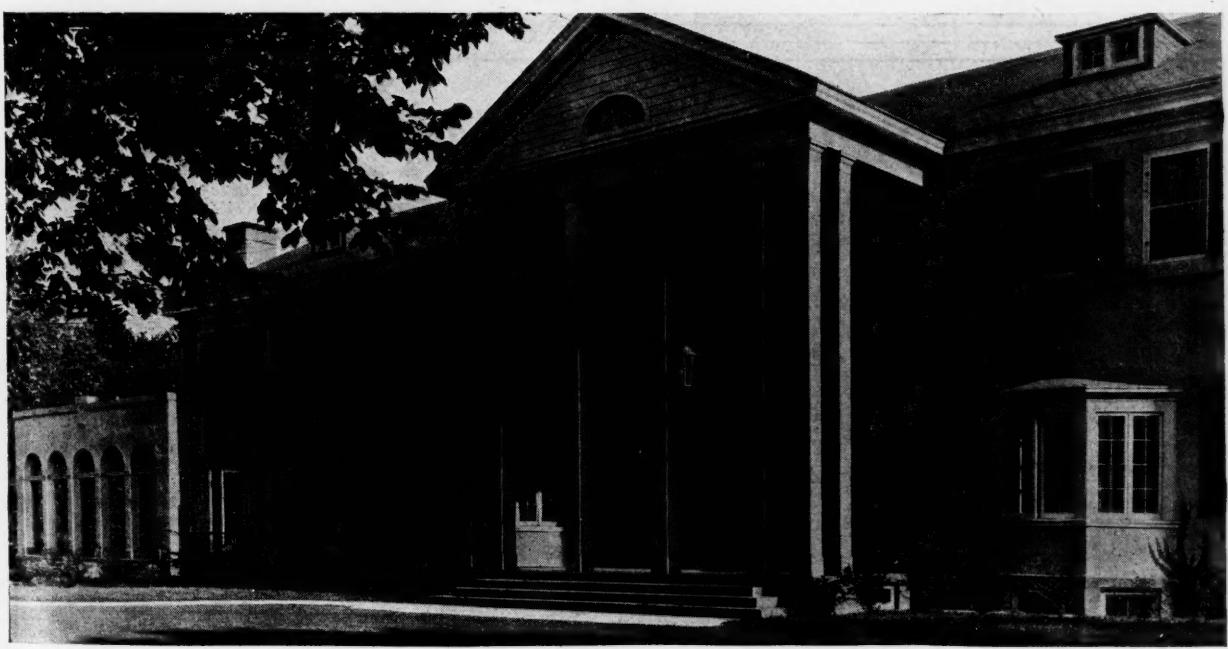
CONTENTS

ORIGINAL ARTICLES

	Page		Page
Sterilization in the Feeble Minded. H. E. Randall, M. D.....	77	The Kahn Precipitation Test for Syphilis. Robert G. Owen, A. M., M. D., H. E. Cope, B. S., M. D.....	94
Hypothyroidism and Its Relationship to Chlorotic Anaemia. L. M. Warfield, A. B. M. D., I. W. Greene, A. B., M. D.....	79	Modern Conceptions of Heart Disease. George R. Hermann, M. D.....	99
Digitalis: Its Uses and Abuses. John L. Chester, M. D.....	82	A Further Study of the Phloridzin Test in the Early Diagnosis of Pregnancy. L. W. Haynes, M. D.....	105
Bismuth Salicylate as an Anti-Syphilitic Agent. Arthur E. Schiller, M. D.....	86	The Surgical Treatment of Angina Pectoris. J. Walter Vaughan, M. D.....	108
Report of an European Clinical Tour. Earl Ingram Carr, M. D., F. A. C. S.....	90	Experimental Studies on the Nature of Placental Extracts. Constantine L. A. Oden, B. S., M. S., M. D.....	110

Office of Publication,
Powers Theatre Building,
Grand Rapids, Mich.

Entered as second-class matter March 12, 1913, at Grand Rapids, Mich., under the Act of March 3, 1879. Acceptance for special rate of postage made under Article 1103, October 3, 1917 and authorized August 7, 1918.



COLONIAL HALL—One of Eight Units in "cottage plan"

Maintaining the highest standards over a period of forty years, the Milwaukee Sanitarium stands for all that is best in the care and treatment of nervous disorders. Photographs and particulars sent on request.

Resident Staff—ROCK SLEYSER, M. D., Medical Director; WILLIAM T. KRADWELL, M. D.; MERLE Q. HOWARD, M. D. Attending—H. DOUGLAS SINGER, M. D.; ARTHUR J. PATEK, M. D. Consulting—WILLIAM F. LORENZ, M. D.; RICHARD DEWEY, M. D. (Emeritus).

MILWAUKEE SANITARIUM, Wauwatosa, Wis.

FOR NERVOUS DISORDERS

(Chicago office—1823 Marshall Field Annex—Wednesdays 1-3 P. M.)

Points Worthy of Consideration!

∞

"THINLITE LENSES"

For Those Requiring Strong Lenses.

"PUNKTAL LENSES"

For Those Desiring the Best Results
From Their Prescriptions

"WOLVERINE R SERVICE"

For the Discriminating Public Who
Desire the Best in Optical
Work and Service

∞

WOLVERINE OPTICAL COMPANY

701 Stevens Bldg.

Washington Blvd. at Grand River Ave.

DETROIT

Gilbert Bldg.

Grand Rapids

81A W Jackson

Battle Creek

CONTENTS—Continued

Page

Public Health Activities..... 115

EDITORIALS

The Individual Physician and the American
Medical Association..... 120

More Bureaucratic Propaganda—Child Labor
Amendment 123

Diphtheria 125

County Health Officers..... 126

Dues 126

Editorial Comments 126

Minutes of the Mid-Winter Meeting of the
Council 128

Among Our Letters 129

STATE AND SOCIETY NEWS

State News Notes 132

Wayne County 136

Genesee County 136

Houghton County 137

Mecosta County 137

Barry County 137

Jackson County 137

Calhoun County 138

Gogebic County 139

Berrien County 139

Oakland County 139

Muskegon County 140

Clinton County 140

Ingham County 140

SOCIETY BUSINESS AND ACTIVITIES

Ingham County Medical Society Initiates
Program for 1925..... 134

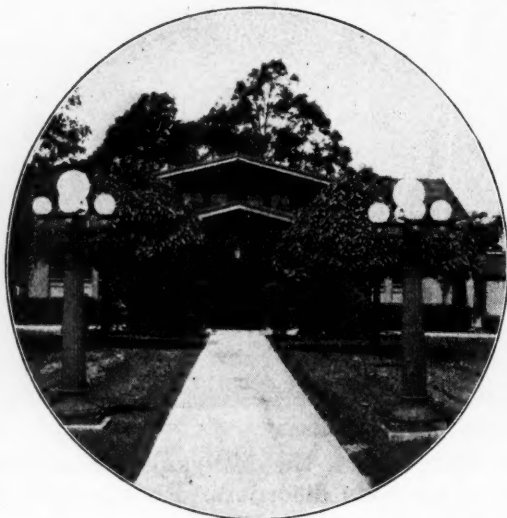
Roll Your Pills Into Dynamos..... 134

AMONG THE BOOKS

Operative Surgery. Warren Stone Bickham,
M. D., F. A. C. S..... 144

THE SAWYER SANATORIUM

White Oaks Farm, Marion, Ohio



**Treats Nervous and Mental
Diseases**

NERVOUS DISEASES

Both organic and functional, such as Nervous Prostration, Neurasthenia, Paralysis, Neuralgia, Locomotor Ataxia, Nervousness associated with Ductless Gland Disorders, Muscular Degenerations, Neuritis, etc., are all provided for at the Sawyer Sanatorium.

Send for Booklet. Address

THE SAWYER SANATORIUM, White Oaks Farm, Marion, Ohio

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XXIV.

GRAND RAPIDS, MICH., FEBRUARY, 1925

No. 2

Original Articles

STERILIZATION IN THE FEEBLE-MINDED*

H. E. RANDALL, M. D.
FLINT, MICH.

A large share of the taxes and energy of the United States is spent on degenerates, the feeble minded, and the mental defectives. Enlargements and additions of our jails, penitentiaries, reformatories, poor houses, and contributions to charitable agencies and homes can hardly take care of the increasing numbers of our weaklings. There are at least more than 300,000 recognized feeble minded in the United States. Lately the offspring of our immigration have shown an increase of feeble minded. Fortunately, the idiot is usually the end of his line.

The serious economic and social question is the propagation of a class between the idiot and the normal human being. If our marriage laws do not permit children of ten and twelve years of age to marry, why in the name of reason should the law permit them to marry when that is their mental age? I think enough data has now been collected to demonstrate that feeble mindedness is hereditary. It may be accepted as true that wooden legs are not hereditary, but that wooden heads are.

Of course, it must be borne in mind that children may become feeble minded through sickness, such as severe infectious diseases, or traumatic brain injuries or birth injuries. The statement of Tregold that "I have never seen the brain of an idiot, of a lower or even a medium grade imbecile which could be regarded as normal upon careful examination," may take an extreme view as the underlying brain condition is an imperfect or arrested development of the cortical cells of the brain. Gross changes may be present in the brain without corresponding mental defects. We know that mental defects are incurable and that the fourth cortical layer is the earliest to mature and the last to suffer destruction in the dementias. The second layer is thinner in lower animals and in feeble minded than in

normal and the first to show changes in the dementias. The supra granular layer is the characteristic human cortical layer.

Now as to heredity: The best known family is that of the Jukes. A family that has cost one state several millions of dollars. Of the 709 of the 1,200 in the family that could be traced, 140 had been imprisoned for crime, 280 have been paupers or dependents on public support and charity, and a large majority were of low physical and moral standard.

Ida Tarbell in her book, "In the Footsteps of Lincoln," leaves no doubt that Abraham Lincoln came of an exceedingly good line that bore the name and physical and racial characteristics so well known in our martyred president, and removes the odium from his father that has been attached by early historians to his name.

Of the 102 Pilgrims in the Mayflower, only 23 are known, but they were the ancestors of five presidents, of Root, of Emerson, of Longfellow, Leonard Wood and others. Heredity explains why, of the first 46 names in the American Hall of Fame, 26 of them had 1 to 3 relatives of national reputation. Heredity explains why the Jonathan Edwards family of 1,400 in various countries has had 1,400 social servants, many of international reputation. A feeble minded family of 15,000 will have nearly 15,000 social scourages. Heredity makes plain why one line of the Kallikak family, investigated by Goodard, had 36 who were illegitimate, 33 immoral, mostly prostitutes, 142 were feeble minded, while only 46 were normal, and the other union with a normal woman had a hereditary line of 496, nearly all of whom were owners of land and respectable citizens.

A marriage of a normal man with a feeble minded woman may result in all normal children, but it will also carry the taint in the germ plasma, according to the Mendel Law, and will result in feeble mindedness somewhere in the grandchildren and so on to the last generation of time.

"The high grade imbecile, the feeble minded, as he is called in England, or the moron, as he is called in the United States, is one who is capable of earning a living under favorable circumstances and conditions, but is incapable

*Read before the Section on Surgery, M. S. M. S., Mt. Clemens Annual Meeting, September, 1924.

from mental defects existing from birth, or from early of age, of competing on equal terms with his normal fellows, or of managing himself or his affairs with ordinary prudence." This is the definition of the Royal College of England. Goddard says at least 66 per cent of feeble mindedness is hereditary. Probably 80 per cent is a truer figure. (Goddard, Davenport and Tregold.)

Civilization is getting to be a strenuous affair and until we have methods of changing the nature of men or circumventing heredity, the greatest kindness we can do to these unfortunates is to prevent the propagation of their kind and relieve posterity of the burden of their support. We have recognized heredity as the most important factor in all animals below man, but we have steadfastly refused to see that these same identical laws apply to mankind.

Allow me to repeat, that our jails, poor houses and state institutions are now crowded with the feeble minded. That heredity is the controlling factor and that environment is but another name for possibility or opportunity and it is up to the medical profession to prevent the reproduction (breeding) of human stock bearing serious mental defects. The social workers of the various state homes for feeble minded can furnish you with a list of many of the families and the information they can give is startling. One family in Michigan started in Mt. Clemens, which is now being investigated, seems likely to eclipse the record of any feeble minded family heretofore recorded.

The legislature of Michigan in the session of 1923 passed Act No. 285 authorizing the sterilization of mentally defective persons. Summarized as follows: After defining the words mentally defective to include idiots, imbeciles and feeble minded, the act authorized a court of competent jurisdiction to order such treatment by X-ray, or the operation of vasectomy or salpingectomy, or such other treatment as may be least dangerous to life to render said defective incapable of procreation on the application of the mother, husband, wife, brother, sister, child, or next of kin of the defective or any of the following persons resident in the county in which the adjudication was made: the prosecuting attorney, sheriff or any peace officer, or the board of control of any state penal, corrective, or charitable institution, if under control of the state. The judge of probate shall determine a proper person to make report and application, or on application of the guardian and an order for sterilization may be made at the time when the application is made. The court fixes a date for the hearing and examination by three reputable physicians into the mental condition and their opinion as to the question whether

adjudged defective should be dealt with under the terms of the act. A provision is made in the act for a jury of six free holders if deemed necessary by court, or if requested by the defective himself, guardian or relative. The act specifically states that it *shall apply only to cases of inherited tendency to mental defectiveness* and the patient must be over ten years of age.

I believe the Michigan state legislature has made a move in the right direction and in carrying out this work I have performed the operation of sterilization by the following methods: In the male an incision is made in the scrotum down the spermatic cord, the vas-deferens is separated and excised for at least an inch and a half. The upper or proximal end is allowed to retract, while the lower is stitched to the subcutaneous tissue of the scrotum and the incision is closed. Remember, there are 60,000 spermatozoons per cubic millimeter. (Thorek.)

In the female an incision is made to the right or left of the median line, the uterus is drawn up to the opening of the incision by a single tenaculum or uterus holder. A chromic catgut suture is applied around the Fallopian tube one inch from its insertion in to the uterus. The Fallopian tube is pulled up and, with scissors an oval area is clipped which is about one-half inch long and one-fourth inch wide, down into the muscular tissue of the uterus. Sometimes the Fallopian tube, like a small artery, is seen, a thumb forcep is applied and a further portion of the tube is removed and the incision of uterus is closed with small chromic catgut. The fallopian tube is again *cut off* proximal to first suture applied. A small pocket is made in the anterior of the broad ligament. The needle and catgut still attached to the tube, is introduced to bottom of pocket of the anterior leaf of the broad ligament and all raw peritoneal surface is closed to prevent adhesions. In all cases healing has been by first intention and there is no possibility of their ever becoming pregnant. *No organ is removed in either male or female.*

To diverge, the vasoligation of Steinach was done at two points, one at the end of epididymis, and the other between the epididymis and testicle, the theory being that the interstitial (Leydig) cells would then receive the entire blood and rejuvenate and turn the old man into a young buck. This he called the autoplasmic treatment of old age. (Thorek). After we have learned to transplant skin and bone successfully in all cases there is still time to take up the grafting of highly differentiated tissues.

My only comment on these operations, that no one seems to have observed or recorded any rejuvenation when the White operation (Vasectomy) was the rage 25 years ago for hyper-

trophy of the prostate. Vasectomy, we believe, has no effect on sex function outside of the loss of power of reproduction. An irritable prostate in an old man offers much more of promise in the field of mischief.

As a nation we have delicate experimental instruments for the measurement of length, of mass, capacity, time, wave length, co-efficient of expansion and melting points. We provide against forest fires, mine and factory explosions, preserve bird life, destroy insects and preserve food and shelter supply, but we do not investigate why 20,000 dementia praecox cases enter our insane asylums each year, costing the rest of the population a dollar per head and the entrances are still increasing needing institutional care; while our jails and penitentiaries are full and *charity increaseth*.

It is, I believe, the duty of the medical profession to study and prevent the increase on this earth of the criminal, the insane, the social unfit, the feeble minded and the sociopathological. Let us apply the same humanitarian rules to human beings that we now apply to the lower animals.

It is not the environments, but heredity, that counts most. Our surroundings in America are better than any country in the world, and our standard of living is higher, but we have more crime.

The medical profession has lengthened human life to an average of 58, but also remember that in the advance of medicine we are not only saving the fit, but also the unfit.

"Men do not gather grapes of thorns, or figs of thistle."

"HYPOTHYROIDISM AND ITS RELATIONSHIP TO CHLOROTIC ANAEMIA*"

L. M. WARFIELD, A. B., M. D.

I. W. GREENE, A. B., M. D.

ANN ARBOR, MICH.

In the last decade the problems of the medical man have quite largely turned to those of metabolism, and especially to the influence of the ductless glands upon the various metabolic functions.

The two glands concerning which we have secured somewhat accurate information are the pancreas and the thyroid. Our studies and interest in the thyroid gland have, to a great extent, been upon conditions in which there is an over-activity, or at least an abnormal function of this gland. Many of the problems of hyperthyroidism have been at least partially arrived at. At least, we can say that there has been a tremendous amount of work done in attempting to solve these problems.

A phase of thyroid disease, which we believe, has not been sufficiently appreciated or studied, is that of hyperthyroidism. Clinicians have, for a good many years, recognized two clinical types of hypothyroidism, that is, myxedema and cretinism. In typical cases of either group the clinical picture is so evident that the experienced medical man should make the diagnosis without the aid of any laboratory procedure.

In addition to these two easily recognizable groups we feel that there is another considerable sized group which is frequently overlooked. Probably because the members of this group exhibit only in minor degrees those manifestations usually associated in our mind with hypothyroidism. Most of such individuals complain of only minor degrees of ill health, such as inability to do a full day's work, tiring easily, lack of resistance to minor acute infections and lack of ambition. And in female patients, which comprise the greater number, there is often a disturbance of the menstrual function. This most often takes the form of infrequent and scanty periods, although in young women, excessive flowing is not unusual. Such patients are rather often diagnosed as belonging to one of the functional neurosis, while others are suspected of being victims of our old standby, focal infection, and have had many innocent teeth and tonsils removed, and not infrequently, have had pelvic operations in the hope of securing better health. Lawrence¹ sums it up very well when he states, "the history of the hypothyroid patient has only one characteristic feature: sub-efficiency of the bodily machine. Whatever the symptoms for which the patient seeks relief there is always in the story a background of inefficiency, usually physical, and, in the cases of long duration, mental as well."

Physical examination may reveal very little. Generally there is a moderate or slight degree of thyroid enlargement with usually a rather firm, non-vascular gland. If there is any coarseness and dryness of the skin and hair it is usually of a rather minor degree, especially in the younger individuals. The pulse is not necessarily slow, often being somewhat above normal when moving about, but if such patients lie down for half an hour the pulse will show a greater slowing than in normal individuals.

We have been particularly interested in one aspect of this problem, namely the relation of a lowered metabolic rate, presumably due to hypothyroidism of minor degree, to chlorosis, or rather to a chlorotic type of anaemia.

Chlorosis as a distinct entity has been recognized for a good many years. Ashwell² in 1836 gave a rather comprehensive description of the disease, of course, without the typical blood findings. From that time on it has been the subject of much study and speculation. Of

*From the Department of Internal Medicine, University of Michigan Medical School.

late years it has aroused less interest, largely due to the fact that the number of cases has apparently decreased considerably. This has been shown by Cabot³ as regards America, Shauman⁴ in Sweden, Deneke⁵ in Germany, and, in a comprehensive study by Cambell⁶ in England. That this is true as regards the severe types, there can be no question. Quite possibly the less severe forms are often overlooked, or in many cases put in the group of secondary anaemias. The milder cases are, of course, usually treated by their family physician, and often they do not enter into hospital statistics.

We have in the last two years studied a small group of cases, which we classified as having chlorosis, or at least a chlorotic type of anaemia, taking as our diagnostic criteria the fact that with varying degrees of ill health, the patient's blood showed a normal, or practically normal number of red blood cells, with a definitely low color index, and in whom there was no demonstrable factor which might produce a secondary anaemia. No attempt was made to determine the blood volume or the specific gravity of the blood. The counts were made in the usual way, the hemoglobin usually being determined with the Sahli apparatus, which was, however, frequently checked up for accuracy. The basal metabolic rate determinations were done on a Roth modification of the Benedict portable machine, and were done by a very accurate technician.

The group of cases which we have classified as chlorosis have, with one or two exceptions, shown some degree of lowered metabolic rate, which we believe to be largely due to hypothyroidism. Some of the cases we shall mention show rather minor degrees of disturbance. We feel, however, that these are perhaps the most important as they are more likely to be overlooked.

The etiology of chlorosis has long been a subject of speculation and many theories have been put forward largely without experimental data and we would not wish to give the impression that we think that hypothyroidism is the only cause of chlorosis, but only wish to draw attention to the fact that they are not infrequently associated, and feel that in studying such individuals such an association should be looked for. This is undoubtedly of greater importance in the goiterous district in which we live than it would be in some other sections of the country where thyroid disease is less prevalent.

CASE REPORTS

Case No. 1. Student nurse, age 19. She was first seen February 16, 1923, at which time her chief complaint was that of tiring easily and paleness. She stated that she has always been pale and tired rather easily, but for the last few months, both complaints have been more severe and she found it very difficult to carry on her duties. At times

she was very giddy or faint. Her appetite was fairly good, she had no unusual craving, but did not eat very freely of vegetables or fats. The Cardio Respiratory and Genito Urinary history were negative. Her menstrual periods were somewhat excessive. Under family history she stated that several paternal relatives were pale and have been told that they had anaemia.

Physical examination showed a well-developed young woman, slightly underweight, the skin was pale, with almost a greenish tinge, the mucous membrane were all pale. There was a small symmetrical, rather firm enlargement of the thyroid, with no thrills or bruits. The heart, lungs, abdomen, and extremities were negative. The urine and blood Wasserman were negative as was an X-ray examination of the chest.

Blood examination showed the hemoglobin 43 per cent, the red blood cells, 4,850,000, the white blood cells 8,400, the differential count was normal. The red blood cells were acromatic, showing moderate variations in the size and shape with a very few irregular poikilocytes. No blasts were observed, and the platelets were about normal.

The Basal Metabolic rate examination taken at this time was $-17 \frac{3}{10}$ per cent, following this the patient was given thyroid extract, gr. 2, b.i.d., and this was continued with a few interruptions over the next 6 months, being checked by the Basal Metabolic rate determination at two to four week intervals, the various readings being $-13 \frac{9}{10}$ per cent, -13 per cent, $-12 \frac{1}{2}$ per cent, -14 per cent, $-12 \frac{1}{2}$ per cent, and on December 28, 1923, approximately 8 months after beginning treatment, $-5 \frac{1}{2}$ per cent.

The blood findings taken at about monthly intervals, showed a steady improvement. March 5, 1923, the hemoglobin was 55 per cent, the red blood cells 4,750,000, the white blood cells 7,000. April 24, 1923, the hemoglobin was 67 per cent, the red blood cells 5,100,000, the white blood cells 8,000, the differential was normal. May 20, 1923, the hemoglobin was 70 per cent, the red blood cells 5,000,000, the white blood cells 6,900. June 24, 1923, the hemoglobin was 75 per cent, November 11, 1923, the hemoglobin was 80 per cent, the blood cells 4,750,000, the white blood cells 7,500.

During this period of improvement, with the exception of the first month, the patient was able to carry on her usual duties and received no other medication than the thyroid extract. At that time the thyroid extract was discontinued and 6 months later she returned again complaining of rather similar symptoms. Explanation at that time showed the hemoglobin to be 50 per cent, the red blood cells 5,000,000, the white blood cells 7,300. The Basal Metabolic rate was -14 per cent. She was again placed on thyroid extract and began to improve but passed out of our observation.

This case showed over a long period of time, a rather constant relationship between the Basal Metabolic rate and the blood findings. She did not respond as rapidly to thyroid extract as one might wish, yet we feel that there was considerable benefit secured from its use, and a definite relapse when it was discontinued.

Case No. 2. A young woman, 28 years old, who was first seen October 18, 1922, complaining of increase in weight, abnormal appetite, pain and swelling in the arms and legs, frequency of urination and incontinence. One year previous to admission the patient had a left oophorectomy and bilateral salpingectomy. In the four months following operation she gained 50 pounds in weight, and during this time she had headaches and nausea. She was told that her systolic blood pressure was 170 and was given ovarian extract which re-

lieved some of her symptoms. She lost the vision in one eye, which however returned under potassium iodide medications.

Examination showed moderate obesity with a habitus slightly suggestive of hypopituitarism. The skin was pale and pasty, and the mucous membranes appeared pale. The pupils reacted to light and accommodation. The heart, lungs, and abdomen were negative. The blood and spinal fluid Wassermans were negative.

On October 10, 1922, the hemoglobin was 46 per cent, the red blood cells 4,820,000, the white blood cells, 7,500. The differential was not abnormal. Six days later, the hemoglobin was 40 per cent, the red blood cells 4,580,000, the white blood cells 4,700. At this time the Basal Metabolic rate was -18.5 per cent, reported a few days later it was -15.5 per cent. She was given thyroid extract, gr. $1\frac{1}{2}$ t.i.d., and on November 13, 1923, the Basal Metabolic rate had reached $+16$ per cent., and during this time the hemoglobin had steadily risen to 66 per cent, with the red and white blood cells remaining at essentially the same point. How large a factor the thyroid extract was in reducing her anaemia we can not say, as she also received Blaud pills, and other medications.

Case No. 3. A student nurse, 19, was first seen February 1, 1923, with a chief complaint of a pain in the right side of the abdomen. The cause of this pain was not definitely settled, and it passed away in a few days. It was noted at the time of examination that in addition to the finding of tenderness over McBurney's point, there were some findings of general interest. The girl seemed a little dull mentally, and had not done her work well. She complained of tiring easily, and being sleepy. The skin was pale and pasty, and there was some hypertrichosis. The thyroid showed a moderate firm enlargement.

The Basal Metabolic rate was -16.5 per cent, the patient was given thyroid extract gr. 2, b.i.d., and began to show immediate improvement in appearance and strength. The possibility of the patient having a chlorotic type of anaemia was not at first appreciated and the blood was not examined until April 10, 1923, about two months after beginning treatment. At this time the hemoglobin was 70 per cent, the red blood cells 4,990,000, the white blood cells 8,000, the Basal Metabolic rate was -9.5 per cent. May 23, 1923, the hemoglobin was 83 per cent, the red blood cells 5,100,000, the white blood cells 6,800, and the Basal Metabolic rate was -5 per cent.

Case IV. A female clerical worker, age 25, was first seen April 2, 1923. Her complaints were also paleness and weakness. Physical examination was negative, apart from a somewhat pale skin and mucous membranes. The Basal Metabolic rate was -9 per cent, the white blood cells 6,300, the red blood cells 4,930,000, the hemoglobin was 65 per cent. Thyroid extract gr. 2, b.i.d., was given the patient, this she did not tolerate very well. On April 30, 1923, the Basal Metabolic rate was $+4$ per cent. The thyroid extract was taken intermittently from this time on. On June 17, 1923, the hemoglobin was 85 per cent, the red blood cells 5,200,000, the white blood cells 6,600. She was not seen again until September 22, 1923, when she returned complaining of her old symptoms. At the time that she returned her Basal Metabolic rate was -17 per cent, the hemoglobin was 71 per cent, the red blood cells 4,980,000.

The thyroid medication was again begun and three months later the Basal Metabolic rate was -9 per cent, the hemoglobin was 80 per cent, and the red blood cells were 4,860,000.

Case 5. A student nurse, age 20. She was first

seen because of enlargement of her neck and complaints of weakness. Her history was negative. Examination showed a dry, coarse skin, and pale mucous membranes. There was a rather firm colloid goitre, with small adenomas. The basal metabolic rate was $-17\frac{1}{2}$ per cent, the hemoglobin was 65 per cent, the red blood cells 4,650,000. Under thyroid extract gr. 2, b.i.d., the patient showed subjective improvement, and on August 5, 1923, two months later, the hemoglobin was 81 per cent, the red blood cells 5,100,000, and the white blood cells 7,500.

Case 6. Student nurse, age 22, whose chief complaint was loss of weight. She had lost 20 pounds in the last year and tired rather easily. Her menstrual periods had been too frequent, and somewhat excessive in amount. Physical examination was negative, as was the chest X-ray.

The Basal Metabolic rate was $-11\frac{1}{2}$ per cent, the hemoglobin was 75 per cent, the red blood cells 4,500,000, the white blood cells 8000. She was given thyroid extract gr. 1, b.i.d., for two weeks, then as the complaints had disappeared treatment was discontinued and the case was not followed.

Case 7. Female, age 22, University student, was first seen November 13, 1923. Her chief complaint was that of weakness and paleness and pain in the legs. For three or four years she had tired easily, and found it difficult to apply herself to her work, and had been pale during most of this time. Lately she had had considerable pain in the legs. The past history was negative, as was the family history.

Physical examination showed the patient somewhat overweight, and rather peculiar mentally, the skin was very pale and pasty, with a slightly greenish hue, the mucous membrane was also pale. There was no thyroid enlargement. The heart showed a functional systolic murmur. The lungs and abdomen were negative. The hemoglobin was 55 per cent, the red blood cells 4,000,000, the white blood cells 11,000, the platelets were abundant and there was moderate acromia. One month later she was again seen, the hemoglobin was 45 per cent, the red blood cells 5,100,000, the white blood cells 8,600, the Basal Metabolic rate was -10.5 per cent. Thyroid extract gr. 2, b.i.d., was started and on January 16, 1924, the hemoglobin was 60 per cent. The patient evidently did not tolerate the treatment very well, the pulse was somewhat rapid, the Basal Metabolic rate had gone up to $+5$ per cent. The patient was also somewhat nervous. The thyroid extract was discontinued and Iodo Starine tablets, one once a day, were substituted, along with Blaud pills.

This case while showing a rather typical chlorosis, did not as far as her Basal Metabolic rate determination would indicate, belong very definitely to the hypothyroid type. Her general appearance, however, was more suggestive of hypothyroidism than most of the other cases noted.

Chlorosis is not generally a disease thought to affect the male sex. We have, however, one case showing a definite chlorotic type of anaemia.

Case 8. A physician, age 43, whose chief complaint was weakness and some gain in weight. For years his strength had been poor, particularly in the morning. He also felt very nervous. The past history was that of influenza in 1918, appendectomy 7 years ago, and catarrhal jaundice 6 months ago. The physical examination was essentially negative. The Basal Metabolic rate was -17 per cent, the red blood cells 3,150,000, the white blood cells 3,100, the hemoglobin was 35 per cent. He had been told previously that the Basal Metabolic rate determination was -30 per cent.

DISCUSSION

As suggested before, the etiology of chlorosis has been the object of much speculation. Faulty hygiene, tight lacing, and many other factors have all had their proponents. There has, however, remained two points that all authors have accentuated, and that is the age and sex factor, occurring as it usually does in young women early in the menstrual life. This would suggest in itself that some change in the endocrine system was instrumental in its causation.

Very possibly we must change our ideas of chlorosis as a definite disease, and think of it rather as a clinical entity not always due to the same etiological agent. Fifteen years ago all cases with a certain blood picture were diagnosed, pernicious anaemia, today we recognize that there are a number of abnormal conditions which can give the blood picture and clinical findings associated with Addisonian anaemia, and in those cases in which we do not discover the etiological agent we often feel that we have overlooked a diagnostic point which would have given us a clue to some hidden infection.

If we assume that the blood picture which we call chlorosis has as an underlying factor some endocrine disturbance, it does not necessarily follow that the gland, or glands, at fault are always the same. It is our opinion that in many cases the gland primarily at fault is the thyroid. This would be particularly true in districts in which there is an iodine deficiency. An association between thyroid disease and chlorosis has often been noted. Bigelow⁷ in 1859 mentions the frequent association of enlargement of the thyroid and chlorosis, and Chvostek⁸ in 1893 made a similar observation. Marine and Lenhart⁹ in 1911 mention that thyroid hyperplasia and chlorosis are often associated, but did not feel that the exophthalmic state had any especial relationship to chlorosis. These observations were of course all made before calorimetry was available in the study of patients and naturally hyperthyroidism, rather than hypothyroidism, was assumed to be at fault. In some instances other endocrine factors than the thyroid undoubtedly play a greater or lesser part. In case two, for instance, we can assume that the lack of ovarian secretion following oophorectomy was an important factor. Endocrinology is yet in its infancy and in spite of the vast amount of recent literature on the subject there is a feeling among most medical men that we yet have much to learn concerning the real part that each gland plays in the body metabolism, and even less knowledge of the inter-relationship of the ductless glands. The vast amount of work necessary in the standardization of Insulin gives us some inkling of the advances

we must make before endocrine gland therapy is reliable or satisfactory. This, we feel, explains to some extent the fact that we got widely varying results from the thyroid extract medications.

It has long been an accepted fact that iron is of great value in the treatment of chlorosis and we would not feel that its use should be discontinued, but that it should be supplemented by thyroid extract, perhaps in connection with other glandular products when metabolic studies show a lowered rate. Such treatment may be of particular value in avoiding relapses and in securing a better condition of general health.

SUMMARY

We have in this small series three cases which would, by all the usual criteria, be diagnosed chlorosis; of these three, two show quite definitely an association with hypothyroidism, in one the association is quite questionable.

We have four cases of milder degrees of chlorotic anaemia which show varying degrees of hypothyroidism. We have a rather definite chlorotic type of anaemia in a man with a lowered metabolic rate.

Several cases show rather definite improvement under thyroid therapy, two cases relapsed when thyroid extract was discontinued, and again showed improvement when it was resumed.

REFERENCES

1. Lawrence, Chas. H., Boston Medical and Surgical Journal. 190:307, 1924.
2. Ashwell, S., Guy's Hospital Reports 1:529, 1836.
3. Cabot, R., Osler's and McCrae System of Medicine 4:639, 1908.
4. Schauman, O., Acta Medica Scandinavica Supplement III, 246, 1922.
5. Deneke, T., Deutsche medizinische Wochenschrift 50:902, 1924.
6. Cambell, J. M. H., Guy's Hospital Reports 73:247, 1923.
7. Bigelow, Boston Medical and Surgical Journal 61:37, 1859-60.
8. Chvostek-Wein., Klin. Wochenschrift 4:487, 1893.
9. Marine and Lenhart, Archives of Internal Medicine, 8:265, 1911.

DIGITALIS: ITS USES AND ABUSES*

JOHN L. CHESTER, M. D.

DETROIT, MICH.

In dealing with diseases of the heart, at least two potent and helpful assistants can be summoned: absolute rest, and the drug digitalis. The merits of the first as an unfailing aid in all forms of cardiac trouble, are too well known to incite any explanation or discussion. The remedial powers of the latter are by no means so all-embracing, but digitalis has a distinct and specific mission in the heart field, and the type of case in which it may be used and the results it may be expected to give, have now been clearly outlined and defined.

*Read before Section on Medicine, M. S. M. S., September, 1924.

The pharmacopeia has no member more fascinating or deserving of intense study; none concerning which there are more misunderstandings or fallacies as to the scope of its administration; and conversely, none which requires to be so thoroughly understood by the prescribing physician. Its very history is almost an epic.

Other heart tonics there are, and many of them, as: strophanthus, strychnin, morphin, the cinchona derivatives—potent drugs, all, though some of them have not yet emerged from the experimental stage, and as in the case of digitalis, somewhat circumscribed in their several spheres of application. Their real merits can only be ascertained by experience in dealing with many and different classes of cases, and this is unqualifiedly true of all heart tonics.

Our consideration is with digitalis alone and its field of operations; as an aid in the successful treatment of heart disease.

As far back as the sixteenth century digitalis has been known, but then only as a botanical entity. Its virtue as a medicine is comparatively recent knowledge, while its pharmacology and use in general can truly be said to be modern.

William Withering of Birmingham, England, first experimented with the drug in 1775. It was brought to his attention when he investigated some old family recipe for the cure of dropsy. This remedy was compounded of several different herbs, the most active of which was found to be the foxglove.

Withering first experimented with digitalis as a diuretic and used the root of the plant, though afterwards he confined himself solely to the leaf. Careful perusal of his records will show that although he used the drug as a diuretic, he noted its good effects in certain heart cases.

From his day until the late eighties little was added to medical knowledge concerning this product of the foxglove. About this time Schmiedberg produced the active principles, and thus to German sources is the modern pharmacology of digitalis due.

Digitalis is essentially a narcotic, a cardiant, a diuretic and a stimulant. It elevates the blood pressure, increases the systole, lengthens the diastole and contracts the arterioles. Its most widely used active principles are: Digitoxin (the most poisonous), and digitalin, both glucoside by nature, but neither represents thoroughly the action of the drug. Strophanthus, convallaria, squills and cuabain, can be classed as allies of and belonging to the same family, and are more or less capable of producing similar action, the only difference being that the action of digitalis is more prolonged, while that of strophanthus is more rapid and intense. These differences are due to the mode of ad-

ministration, (orally in the case of the former, and intravenously as to the latter), and also on account of the physical properties of the various drugs. The myocardium absorbs strophanthus much more easily, but also gets rid of it much more rapidly.

It is true that this drug, digitalis, was ignored, or at least, neglected for a long period, when it could have readily been an important factor in the medical armamentarium, but amends have been so made that an increasingly dangerous situation now presents itself. It is being put to every conceivable use, and therapy has wandered far from the direction in which digitalis is really the sovereign remedy.

A definite knowledge of the use and abuse of this important drug is a paramount necessity. The commercial world has even fastened on it and made it the subject of advertising campaigns whereby its indiscriminate use is advocated by manufacturers and others of empirical medical knowledge. Truly a prostitution of the "Queen of the Pharmacopeia," as digitalis has so rightly been called.

I cannot over-emphasize the fact that digitalis is not a cure-all. It is only helpful in certain specific heart conditions.

The various forms in which digitalis may be given all have their adherents and advocates, and much has been written in justification, with but little result. The tincture, the infusion, and the powder, as well as the active principles, all have their admirers. This much may be said, that all the galenical preparations produce practically the same action when these preparations are physiologically standardized so that the dosage can be accurately regulated.

Withering, than whom probably no one yet speaks with more authority, voices from his eighteenth century this specific objurgation:

"The ingenuity of man has ever been fond of exerting itself to vary the forms and combinations of medicine. Hence, we have spiritous, vinous, and acetous tinctures, extracts hard and soft, syrups with sugar or honey, etc., but the more we multiply the forms of any medicine, the longer we shall be in ascertaining its real dose."

The tincture is perhaps the best preparation of all. It, of course, does not represent the entire drug, but it retains its strength much longer than the infusion. To the fluid extract, a concentrated preparation, there are many objections, chief of which are that evaporation materially changes its strength, and on account of the smallness of the dose, it is difficult to grade the dosage. The infusion loses its strength very rapidly, and is very nauseating, much more so than the other preparations. In case of administration the powdered leaves surpass the others when taken orally.

The official preparations are, the fluid extract, the infusion, and the tincture.

It is indeed hard to say what preparation should be selected to obtain the most satisfac-

tory results. Probably it makes little difference so long as the physician uses a preparation which is active and with which he is familiar. I prefer a tincture in ounce bottles. I have found it potent and altogether reliable.

Where massive doses are immediately necessary, the only satisfactory way is to administer them intravenously.

Digitalis may be given in a single massive dose, in a modified massive dose, or in regularly repeated small doses. The difference lies in the length of time needed to produce results. As a matter of fact, I am firmly of the belief that in the majority of failures to obtain satisfactory digitalis action in properly digitalis cases, the reason for such failure lies, not in the drug itself, nor in erroneous dosage. The dangers in toxic effects from digitalization are more fancied than real; in fact, a certain toxic effect should be sought rather than avoided. To obtain full therapeutic effect it should be pushed until it acts on the stomach, bowels and pulse, and then discontinued for a period. This was Withering's method and it holds good today.

The heart must be brought under the effect of digitalis and kept digitalized, the best results being obtained when the heart rate is kept between 60 and 70 with no deficit.

The proper dose in different conditions opens a fertile field for discussion. Some physicians give small doses frequently repeated, others give large doses computed according to the body weight of the patient, while the small dose not frequently given, is held to by still another set. All, however, seem to agree that the large dose should no longer be given when the effect of the drug is clearly evident on the heart and circulation.

This very important factor should be kept in mind, no matter what size of dosage is preferred, that there is a decided difference in patients as to their tolerance of large doses, and this depends very frequently on the individual rate of excretion.

The dose of the fluid extract is 1 minim, the infusion 4 mils (1 fluid drachm), and of the tincture which represents 10 per cent of the drug $7\frac{1}{2}$ minims. In massive dosage the "Eggleston" method of administration is followed and is designed especially for rapid digitalization by oral admission. It depends on the establishment of an average total amount of the drug which is required to produce full digitalization or the minor toxic action. This total amount is expressed in terms of the activity of the drug and the patient's body weight in pounds. The activity of the drug is determined by the "cat method" of Hatcher, the unit being the weight of dry drug in milligrams which is required to kill one kg. of cat, when a solution is injected slowly and continuously, intravenously. This amount is called a cat unit.

High grade specimens of digitalis average 100 mg. to the cat unit.

The average total of dose of 2 minims of the tincture to each pound of body weight administered orally to man, will produce early toxic signs, this representing 0.1 of one cat unit. The appearance of one or more of the following symptoms of adequate digitalization, or of minor digitalis intoxication, indicates the cessation of further administration, either permanently or temporarily:

Nausea or vomiting (except when due to planchnic congestion and present before treatment.)

Fall of heart rate (not pulse rate) to or below 60 a minute.

Appearance of frequent premature contractions, of definite heart block, of marked phasic arrhythmia, or of coupled rhythm.

Dosage should not be routine, but should be adapted to the nature of the disease and to toleration. In short, administration should be strictly individualized. The drug is essentially a muscle trainer and the heart should be coaxed gradually to greater activity rather than to start with excessive stimulation. In most cases where its aid is required a few hours more or less of rapid heart action is not necessarily fatal, and results can with complete safety be waited for. Therefore, massive doses are not needed, and with the possible exception of auricular fibrillation and really dangerous or moribund conditions, should not be given.

A most important phase of digitalis therapy is its physiologic and toxic effects. When it is given in sufficient amount, a therapeutic effect can be observed in from 2 to 6 hours, and the maximum of action attained in from 12 to 18 hours. In complete digitalization partial or complete auriculo-ventricular heart-block is frequently caused and associated with this one usually finds nausea, vomiting and headache, which, with the heart-block, disappears in from 12 to 14 hours after the discontinuance of the drug.

If it is not stopped when these symptoms appear, a slowing, or perhaps almost a suppression of the urine will result, combined with an increase in the severity of the before mentioned symptoms—the so-called cumulative effect. It will rarely occur, however, with ordinary small dosage, even when the drug is given daily for a long period.

Digitalis vomiting is common, some patients being susceptible to emesis even immediately after small doses, while again others are only affected by large doses. A very efficacious combination of digitalis and atropine sulphate can be administered in small initial doses in intolerant cases, gradually increasing the digitalis dosage to the usual maximum, without inducing vomiting, and with excellent clinical results.

In digitalis poisoning, which is of rare occurrence, an emetic should be given, also tannic acid solutions, and later a quick acting cathartic. Dry heat should be applied to the body and hot fomentations to the kidney area. Nitroglycerin is of some value, but there is no physiologic antidote.

There is no external action—on mucous membranes it is slightly irritant in strong preparations, and tends to cause nausea and vomiting on an empty stomach. Large doses may incite diarrhoea. It is absorbed from the stomach and intestines.

At this point I must pause, for the question already suggests itself: What is digitalis good for, and what are the indications for its use?

In reality, and as a general statement, I should say that digitalis therapy is simple. It is the remedy for cardiac insufficiency, and this holds true, irrespective of the cause of the insufficiency. Herman Sahli of Switzerland, has very clearly expressed the indications of the heart's inability to perform its functions properly, and separates them into five varieties of stasis: Cardiac, respiratory, high pressure stasis, vasomotor stasis, and splanchnic stasis. In each and every one of these varieties of stasis the use of digitalis is indicated. The signs and symptoms which are the result of cardiac insufficiency are usually breathlessness, cough, cyanosis, edema, pain, weakness, nausea, vomiting, enlargement of the liver, decreased urine output, and rapid pulse.

Digitalis is unequalled in the treatment of dilatation of the heart, and of broken compensation in valvular troubles. It eases heart strain caused by over-exertion, and benefits a heart weakened by tobacco. It is beneficial in edema or exudates in any part of the body where there is poor circulation and no serious kidney lesion. All dropsical conditions due to weakening of the circulation are benefited by it, provided there is no kidney trouble or nephritis. The drug is a muscle trainer, the strengthening of the heart action being the patent effect of its administration. There is a systolic influencing as well as a diastolic effect—a better emptying of the ventricle and a lengthening of the diastole, which naturally results in a slowing of the heart rate. This pertinent fact must, however, be kept in mind, that the absolute strength of the heart muscle remains unchanged, the primal effect of the administration of digitalis being to enable it to use to better advantage the power which it has left. The slowing of the heart rate is not entirely the result of strengthening of the heart muscle, but is also a result of the action on the vagus.

In mitral stenosis, where the auricle and ventricle are beating in normal rhythm and the heart doing its work, digitalis is not the remedy, for the systematic circulation would get

but little help. Furthermore, it would not remove the stenosis. But where there is mitral stenosis, combined with auricular fibrillation—and auricular fibrillation is more common with mitral stenosis than with any other lesion of the heart—the beneficial effects of digitalis would outweigh any possible disadvantages.

In mitral insufficiency it is also indicated, tending as it does to better co-apt the leaking cusps, and by strengthening the systole to fill the aorta and pulmonary arteries.

The narrowing of the orifice in aortic stenosis is helped by digitalis, so that an increased power in the systole forces more blood through the orifice and dilates and hypertrophies the left ventricle. Aortic regurgitation, combined with a failing heart, is a clear indication for the use of the drug.

In auricular fibrillation this drug is without question the one sure remedy, and here more so than in any other condition, the massive dose may be rightly prescribed, acting as it does to practically intoxicate the heart and restrain the conductivity of the auriculo-ventricular bundle. A distinction must be made between this condition and the rapid heart action in advanced myocarditis, in which latter case digitalis should be given sparingly.

All therapies have their cruces. So is it with digitalis. When to use or not to use; that is the predominating question. I have already indicated what this important drug is good for, and will now try to outline some of the contra-indications.

Heart disease *per se* is not an indication, nor must the aid of digitalis be called for in all cases of weak and rapid cardiac action. The simple presence of a heart murmur or a perfectly compensated valve lesion do not of themselves indicate its use, while a normal heart is hardly affected by a non-toxic dose.

Generally speaking, if the nature of the lesion producing cardiac insufficiency is such as to produce certain dangers which might be exaggerated by increased effort on the part of the heart, its use should be denied. In cases of high pressure stasis with cardiac insufficiency and cerebral hemorrhages, the latter being the predominating condition, it should not be given. Thoracic aneurysm, associated with cardiac insufficiency, negatives its use, there being a danger of rupturing the aneurysm. Where a myocardium is so degenerated that there is not a sufficient number of normal fibers left to carry on circulation, digitalis would have little effect, for a heart in this condition would certainly not be increased in power, and digitalis or any other drug would fall far short of aiding it to use to better advantage the little power which it has left.

Arrhythmia, palpitation, slight anginoid attacks of neurotic origin, and the various forms of tachycardia, are contra-indications, as is the

effort syndrome. Hyperthyroidism is considered a contra-indication by many authorities, but Dr. Crile is responsible for the statement that a patient with a toxic goitre stands a thyroidectomy much better if given digitalis a week or ten days before operation.

Diphtheria is another contra-indication, because of the similarity of effects of digitalis and diphtheria toxin upon heart structure, resulting in an accumulation of similar effects of stimuli in the same heart. A like situation would, under certain circumstances observe in influenza and flu-pneumonia.

Its use is further to be denied in fatty degeneration of the heart, in vascular contraction, in irregularity of the heart, and in extra systole. It should not be used in acute endocarditis, except where there is an irregularity of the pulse, or in pericarditis unless in the latter condition the heart is laboring. Digitalis is also inadvisable in acute fever processes.

A powerful drug is this product of the foxglove, but at the same time it is a double edged weapon. It is capable of getting the maximum of desired results when it is indicated and skillfully used; it has possibilities for utmost harm where it is not the remedy. In my opinion inadequate doses are too common in modern practice. A majority of the text-books and even the pharmacologists play for safety in advocating small doses and fail to indicate the drug's full efficiency. The empiricists, of course, naturally follow along the lines of least resistance with their denatured courses of treatment.

Large doses ought not to be feared or avoided, the whole aim and object of the drug's exposition should be to produce the maximum therapeutic result with the minimum toxic effect. The "safety" school are apt to miss the former in trying to evade the latter. Heroic doses, while infrequently indicated, can with proper precautions be given with complete safety.

The medical profession owes much to the obscure English housewife of a bygone day, whose crude experimentation in rudimentary medical treatment was the means of uncovering the possibilities of the foxglove. It owes more to that sterling old English physician, William Withering, whose knowledge of the virtues and uses of digitalis, acquired by long and painstaking labors, is only equalled by the scholarly language in which he has handed down to us the entire benefits of that knowledge.

From such a mentor and from the written master-pieces of modern students of cardiology the general practitioner can take inspiration in his study of digitalis. He who would study it, its actions and effects, leavened by personal experience and observation in diverse classes of cases, who uses it with confidence and in know-

ledge, will find it a willing servant and a sovereign remedy indeed.

REFERENCES

- Osborne, O. T.: Yale U. The Princ. of Therapeutics.
Eggleston, C.: Treat. of adv. heart failure Med. C. of N. A., N. Y., July, 1920.
Pardee, H. E. B.: Med. Jour., A. M. A., 1919.
Christian H.: D. in Cardiac Dis., Boston M. & S. Jour., 1922.
Bastedo, W. A.: Mater. Med. Phar. & Therap. end Ed.
Tice, Frederick: Practice of Med. Vol. III.
Forchheimer's Ther. of Int. Dis. Vol. III.
Edwards, A. R.: The Use of D., M. Clinics of Chicago, July, 1916. Vol. 2, No. 1.
Hart, T. S.: Mitral Sten. & Aur. Fib. M. Clinics of N. A., N. Y. Jan., 1919.
Hamburger, W. W.: Adminis. of D., M. Clinics of N. A. of Chicago, July, 1921.
Luten, D.: Errors in Diag. & Treatment of Heart Disease. M. Clinics of N. A., St. Louis, November, 1920.
G. Canby Robinson, Paul D. White, Cary Eggleston, Robert A. Hatcher: Med. Jour., A. M. A., August 16, 1924.

BISMUTH SALICYLATE AS AN ANTI-SYPHILITIC AGENT

ARTHUR E. SCHILLER, M. D.
DETROIT, MICH.

In March, 1924, I presented to the members of the staff of the Grace Hospital, a paper embodying a brief review of the literature, and a preliminary report of my experience in the use of bismuth in the treatment of syphilis, quoting results in some 29 cases. Since that time we have had under treatment 25 additional cases, all of whom have received treatment with bismuth salicylate. Hereby appended are the detailed case reports of these patients selected for treatment from the syphilis clinic of the Grace Hospital.

The type of bismuth used in all of these cases was bismuth salicylate. This was given in two grain doses, injected intramuscularly. We found this product to be practically painless and in no case was treatment refused and in only one case was treatment discontinued temporarily for stomatitis. We have seen no untoward effects, although we have given as many as forty-eight injections to an individual. We have found no Herxheimer reactions. In a number of cases bismuth was given where it was impossible to give salvarsan, owing to the untoward reactions. Most of the cases refused to continue mercury treatment on account of pain, but did not refuse the bismuth.

CASE HISTORIES CONGENITAL

Case No. 1. Doris F., an 11-year-old colored girl, complained of poor vision and headaches. The Wasserman on examination June 7th, 1923, was ++++. The treatment previous to bismuth administration was 0.6 gm. neosalvarsan intravenously at weekly intervals and bi-weekly injections of Hg. salicylate, she having a total of 5.4 gm. of Neosalvarsan to December 21, 1923. Wasserman at beginning of treatment with bismuth salicylate, ++++. Eye condition unchanged.

February 25, 1924, bismuth salicylate gr. 2, intramuscularly was started. The total number of injections given was sixteen.

The Wasserman reaction July 20, 1924, was negative.

This patient was almost blind in the right eye, but at the present time she sees fairly well.

Case No. 2. L. H., a colored boy 10 years old came to the clinic in 1921 with a tumor of the clavicle. The X-rays showed evidence of syphilis. From 1921 to 1924 he received spasmodic treatment with neosalvarsan, mercury and silver arsphenamine. The condition improved somewhat, but the Wasserman remained positive. On January 21, 1924, he received the last injection of neosalvarsan. On February 11, 1924, bismuth salicylate gr. 2 intramuscularly was started. Up to May 25 he received 12 injections of bismuth salicylate. The blood Wassermans were continuously positive to May 24th, when the Wasserman was returned negative. Two Wassermans since this time have been returned negative.

Case No. 3. D. P., a colored girl 13 years old, appeared at the clinic with what was clinically a tertiary syphilide on the leg. The Wasserman was negative. On June 9th she received an injection of bismuth salicylate, intramuscularly and a similar dose on the 13th.

Up to July 28th, 1924, she had received 12 injections of bismuth salicylate. The Wasserman was negative on August 24, 1924, but there had been a breaking down of the ulcer in various areas.

SECONDARY

Case No. 4. J. E., a white male 28 years old, complained of headaches and pain under the jaw. A primary sore was present upon the upper lip. There was generalized adenopathy, papular syphilide of the face and a macular syphilide was present on the body.

Wasserman on admission, August 11, 1923, +++++.

Treatment previous to bismuth, nine weekly injections of .9 gm. neosalvarsan. Bismuth treatment was started January 7th, 1924. At this time the Wassermann was +++++. The lesions had all disappeared and the patient was on a rest period from December 10th to January 11th. Bismuth salicylate, gr. 2 was given intramuscularly every second day to February 28th, a total of twenty injections being given. The Wasserman March 4th, 1924 was negative.

Case No. 5. T. R., a white male, 27 years old, had a primary sore on the penis and a macular eruption on the body.

The Wasserman at beginning of treatment was +++++. The treatment started Jan. 4, 1924 with bi-weekly injections of bismuth salicylate, gr. 2, intramuscularly. The chancre disappeared within two weeks; the secondary lesions in 5 weeks. Wasserman August 8, 1924, negative; September 8, 1924, ++. Patient feels well and has gained six pounds in weight.

Case No. 6. M. P., a white male, 21 years old. Secondary lesions on body.

The Wasserman Nov. 17, 1923, +++++. Total treatment to time of bismuth injections as follows: 10 injections of 0.9 gr. neosalvarsan. Mercury injections intramuscularly, which were discontinued because of pain and mercury rubs substituted.

In March, 1924, the following treatment was started: Weekly injections of 0.9 gm. neosalvarsan and bi-weekly injections of bismuth salicylate gr. 2.

The Wasserman at the end of the rest period was negative.

The Wasserman September 16, 1924, +++++.

LATENT

Case No. 7. E. H., a colored man, 31 years old, was referred from the gastro-intestinal department as a latent syphilitic. He complained of abdominal pains. He had a chancre 18 years ago.

We considered this a case of visceral syphilis.

Wasserman taken January 19, 1924, +++++.

This patient was given bismuth salicylate gr. 2, intramuscularly, receiving 27 injections of bismuth from January 31, 1924, to February 18, 1924. The symptoms disappeared rapidly, but up to the present time the Wasserman is still +++++.

Patient has gained 7 pounds during the course of treatment.

Case No. 8. M. C., a white female, 21 years old, complained of pelvic pain. A routine Wasserman was done, which was +++++. This was a pre-operative case. On April 14th she was given bismuth salicylate gr. 2 intramuscularly and received 18 injections up to July 15th.

The Wasserman report May 22 was +++++; June 30th, negative; August 14th, negative; September 7th, negative.

This case was interesting in that it showed how rapidly certain types of cases cleared with Bismuth treatment.

Case No. 9. M. C., a white female 37 years old, applied for hospital position. A routine Wasserman showed +++++ on Jan. 26th. Thirty-two injections of bismuth salicylate were given at suitable intervals up to July 28th.

On July 31st the Wasserman was negative; on August 4th, Wasserman ++; August 28th, Wasserman +++++.

Case No. 10. F. C., a white female, 36 years old, was referred from the gynecological department as a latent syphilitic on February 28, 1924, when she had a +++++ positive Wasserman. This was a pre-operative case. The patient received on March 6th, 10th, 13th, 18th, 24th and 30th, 0.9 gm. neosalvarsan; on March 31st, April 3, 14, 17 and 21, bismuth salicylate gr. 2 intramuscularly. From May 26th to June 12th she had 6 injections of bismuth salicylate. At this time the Wasserman was plus minus.

Patient disappeared from observation following operation.

Case No. 11. T. W., a white female, 35 years old. A routine Wasserman in the course of a physical examination showed +++++. There was no clinical history of lues.

From January 14th, 1924 to June 6th, 1924, she received 10 injections of 0.9 gm. neosalvarsan. At the end of this time the Wasserman was still positive.

From June 10th to July 21st she received 10 injections of bismuth salicylate gr. 2 intramuscularly.

August 4th Wasserman was negative; September 7th, Wasserman negative.

Case No. 12. A. K., a white female, 49 years old, complained of abdominal pains. Wasserman taken June 5th, 1924, +++++.

From June 5th to August 12th she received 12 doses of bismuth salicylate gr. 2, intramuscularly. On August 24th the Wasserman was negative.

This patient was relieved of the abdominal pain within two weeks, and has gained 6 pounds in weight.

Case No. 13. V. A., a white female, 35 years old. A routine examination for a hospital position revealed a +++++ Wasserman. This was in January, 1923. Patient was put on treatment, receiving

weekly injections of 0.9 gm. neosalvarsan and mercury inunctions.

During 1923 she had three courses of 7 injections each of neosalvarsan. January 1st, 1924, Wasserman returned +++++. Jan. 10, 1924, she was put on injections of bismuth salicylate gr. 2, intramuscularly, bi-weekly. She has received three courses of 16 injection each, with a month's rest period between each. Wasserman September 5th was returned +++++. This patient has shown a decided improvement in physical condition, but we must consider this a Wasserman-fast case that is affected neither by salvarsan, nor by bismuth salicylate.

Case No. 14. I. N., a white female, 43 years old, was referred to me for bismuth treatment when a prolonged course of neosalvarsan and mercury failed to change a +++++ Wasserman.

Treatment began April 4th, 1924, and consisted of bismuth salicylate intramuscularly gr. 2, three times a week, with a rest period of two weeks after 12 injections had been given. Wasserman taken during rest periods was returned +++++. On July 2 she was put on a treatment of .6 gm. neosalvarsan in weekly injections and bismuth salicylate gr. 2 intramuscularly twice weekly. This she received for 9 weeks.

At the end of this time the Wasserman was ++. This patient is still under treatment.

Case No. 15. Mrs. E. P., a white female, 17 years old.

Owing to the presence of syphilis in her husband, a Wasserman was taken on November 19, 1923, which was +++++. She was 5 months' pregnant at this time. She received neosalvarsan in weekly doses of 0.9 gm. Nevertheless she miscarried January 1, 1924.

On March 18, 1924 the Wasserman was still +++++. Treatment was resumed March 20th, patient receiving 0.9 gms. neosalvarsan and two injections of bismuth salicylate gr. 2, intramuscularly. She received a total of twelve ampoules of Bismuth. Wasserman taken April 26th, 1924, negative. Wasserman taken September 16, 1924, negative.

Case No. 16. B. D., a white male, 33 years old, had a routine Wasserman, which was returned +++++. He claims never to have had any knowledge of an infection. His treatment began Oct. 11, 1923, and lasted until January 30, 1924. During this period he had 12 injections of 0.9 gm. neosalvarsan and mercury inunctions. Wasserman at the end of this period was +++.

February 3 the combined treatment of neosalvarsan and bismuth salicylate was started, he receiving 6 weekly injections of neosalvarsan, with bismuth at three-day intervals.

Wasserman taken in March showed a negative reaction.

Case No. 17. Mrs. E. S., white female, 33 years old, was referred with a history of lues. The Wasserman gave a +++++ reaction. She had been treated at intervals for two years with neosalvarsan intramuscularly and mercury intramuscularly. She was placed on injections of bismuth salicylate from February 18, 1924 to July 20, 1924, she receiving 36 injections of bismuth salicylate gr. 2 intramuscularly, with appropriate rest periods.

At the end of this time the Wasserman was negative.

September 14, 1924 the Wasserman was still negative.

I consider this a good example of a Wasserman-fast case, which was reversed by bismuth treatment.

TERTIARY

Case No. 18. E. P., a white female, 37 years old, appeared on the 21st of November, 1923, with

a palmar syphilide. Wasserman taken at this time was +++++. This patient was immediately put on injections of bismuth salicylate gr. 2 intramuscularly, receiving bi-weekly injections, with rest periods during January and April. The lesions cleared up within a few days after the third injection. Treatment was discontinued May 12, 1924. On August 4, 1924, the Wasserman was +, September 7, 1924, the Wasserman was negative.

This case is interesting in that it demonstrated a case that had had no previous treatment and the action of bismuth salicylate upon tertiary lesions.

Case No. 19. E. T., a colored female, 29 years old, who reported at the clinic on March 11, 1924, with a typical rupial syphilide on the shoulders, face and body. The Wasserman taken at this time was +++++. The patient was put on intramuscular injections of bismuth salicylate gr. 2, bi-weekly and from March 20th to July 16th she had 10 injections. The lesions cleared rapidly.

The control Wassermans were all +++++.

During the month of August she had 8 injections of bismuth and August 28th her Wasserman was still +++++.

NEURO-SYPHILIS

Case No. 20. L. P., a colored woman, 30 years old, appeared March 26, 1924, complaining of headaches and back pain. The Wasserman was +++++.

Spinal puncture was not done. Bismuth salicylate gr. 2, intramuscularly was given. This patient was not very regular and received 7 injections between April 10th and June 5th.

The headaches completely disappeared, but up to August 8, 1924, the Wasserman was still positive.

Case No. 21. G. A., a white male, 34 years old, appeared, complaining of defective vision. An examination revealed optic atrophy and endocarditis. He had a chancre 15 years previously. The blood Wasserman was +++++; spinal Wasserman +++++.

From June 14, 1923 to Jan. 7, 1924, he received 15 injections of 0.9 gm. neosalvarsan and 18 injections of mercury salicylate, intramuscularly. On Jan. 27, 1924 the Wasserman was still +++++ and the eye condition had not improved.

From January 21st to July 28th he received 27 injections of bismuth salicylate, gr. 2, intramuscularly. He gained in weight and stated that he felt much better. The eye condition had not improved.

Wasserman report since May 12th +.

Case No. 22. J. G., white male, 40 years old, complained of facial paralysis and a left hemiplegia. This is a case of neuro-syphilis which showed an intolerance for salvarsan.

Patient was put on bismuth salicylate gr. 2, intramuscularly and received 28 injections between the 18th of February and the 15th of July.

The Wasserman report up to August 9, 1924, was +++++.

Patient improved physically, but there seemed to be no effect on the paralysis.

Case No. 23. P. S., a white male, 35 years old, with a history of a chancre 18 years previously, complained of headaches. Spinal fluid Wasserman was not taken.

The blood Wasserman May 22, 1924, was +++++.

Patient was put under treatment, receiving bismuth salicylate gr. 2, intramuscularly every second day, with appropriate rest periods. A total of 20 injections were given.

July 17, Wasserman negative. August 17, Wasserman negative.

Case No. 24. M. J., a white female, 25 years old. History of prolonged sore throat four years previous. Blood Wasserman +++++; spinal Wasserman +++++.

This patient was put on injections of bismuth salicylate gr. 2, intramuscularly and from January 8, 1924 to September 4, 1924, she received 36 injections of bismuth.

The headaches have completely disappeared and patient has gained twelve pounds in weight.

Blood Wasserman September 20, 1924, xx.

Case No. 25. M. H., a white male 36 years old, complained of sharp abdominal pains, cramps in the legs and loss of memory.

Blood Wasserman taken April 15, 1923, negative; spinal fluid Wasserman +++++. This patient received 5 injections of salvanized serum at intervals of two weeks.

Following this treatment he developed an acute mental deterioration and was placed in a sanitarium, where he received 10 injections of neosalvarsan, intramuscularly and mercury rubs.

He was released from the sanitarium February, 1924.

In May of the same year he complained of headaches and "peculiar feelings" in his body.

May 14, 1924, he was put on bismuth salicylate gr. 2, intramuscularly, receiving 30 injections of bismuth from May 14th to August 12th. At the end of this time he was again working as a salesman and had complete relief from the "queer feelings" and headaches. Spinal Wasserman still +++++.

An analysis of these 25 cases shows the following:

Total treated, three congenital, in which the Wasserman was negatived in all.

Three secondaries, in which the Wasserman was negatived in two cases.

Two tertiary, in which the Wasserman was negatived in one case.

Six neuro-syphilis, in which the Wasserman was negatived in one case.

Eleven latent, in which the Wasserman was negatived in seven cases.

In every case there was symptomatic im-

provement, the type showing the least improvement being the later neuro-syphilitic.

ANALYSIS OF DISAPPEARANCE OF LESIONS

Primary lesions disappeared in one or two weeks. Glandular infiltrations disappeared in six to 10 days.

Secondary lesions began to disappear inside of two days, although in some instances they took a much longer period.

In the congenital there was an amelioration of the symptoms within a week.

The tertiary lesions showed disappearance of the lesions within ten days to two weeks.

The neuro-syphilitic are the most indefinite, but there was a disappearance of headaches and muscle pains following the second to third injection of Bismuth.

SUMMARY

(1) In our work with bismuth we have treated and followed through a total of 54 cases.

(2) We can definitely reiterate the statement made in our preliminary report that Bismuth is a valuable agent in the treatment of syphilis.

(3) We believe that it stands above mercury, but below salvarsan in efficiency, inasmuch as it is slower than salvarsan in its action.

(4) We believe that the persistent use of bismuth alone over a prolonged period of time will aid in the cure of syphilis, but we think that the combination of salvarsan and bismuth will give quicker and better results.

(5) The slower and prolonged action of bismuth helps protect the patient against the early development of neuro-syphilis.

(6) That in latent cases and early neuro-syphilis it will act better than salvarsan to check the spread of the ravages of the disease.

CHART OF CASES

Type	Previous tr.	Wass. at beginning of Bismuth	Wass. at end of tr.	Amt. of Bismuth tr.	Results
1. Congenital	5.4 gm. Neosal. Mercury	+++++	Negative	16 inj.	Good
2. Congenital	14.4 gm. Neosal. Mercury	+++++	Negative	12	Good
3. Congenital	None	Negative	Negative	12	None
4. Secondary	8.1 gm. Neosal.	+++++	Negative	20	Good
5. Secondary	None	+++++	Negative	36	Good
6. Secondary	9.0 gm. Neosal. Mercury	+++++	+++++	24	None
7. Latent	Mercury & K. I.	+++++	+++++	27	Fair
8. Latent	None	+++++	Negative	18	Good
9. Latent	None	+++++	+++++	32	None
10. Latent	5.4 gm. Neo.	+++++	plus-minus	11	Good (mixed)
11. Latent	9.0 Neosal.	+++++	Negative	10	Good (mixed)
12. Latent	None	+++++	Negative	12	Good
13. Latent	20.0 gm. Neosal. Mercury	+++++	+++++	48	None (Wass.-fast to Neo&bis.)
14. Latent (Wass.-fast)	Neosal. & Hg. Amt. unknown	+++++	+	18	None (mixed)
15. Latent	9.0 gm. Neosal. Mercury	+++++	Negative	12	Good (mixed)
16. Latent	10.8 gm. Neosal. Mercury	+++++	Negative	18	Good (mixed)
17. Latent	2 yrs. of Neosal. & Mercury	+++++	Negative	36	Good (removal of Wass.-fast)
18. Tertiary	None	+++++	Negative	40	Good
19. Tertiary	None	+++++	+++++	30	Fair
20. Neuro	Tr. off and on	+++++	+++++	27	None (good physical)
21. Neuro	13.0 gm. Neosal.	+++++	+++++	27	None (good physical)
22. Neuro	Off and on	+++++	+++++	28	None
23. Neuro	None	+++++	Negative	20	Good
24. Neuro	None	+++++	++	36	Fair
25. Neuro	10.0 gm. Neosal.	+++++	+++++	30	Fair (good phyy.)

REPORT OF AN EUROPEAN CLINICAL TOUR

EARL INGRAM CARR, M. D., F. A. C. S.
LANSING, MICH.

The purpose of the tour which was taken by a small group of American Surgeons during the summer of 1922, was to provide an opportunity for seeing at work, representative surgeons of famous clinics of Great Britain and Europe. Since the itinerary was prearranged, it was presumed, as actually happened, that operative clinics would represent subjects which had most interested these gentlemen and for which they had won renown. Expression of appreciation is due Dr. Franklin Martin for many letters and advisory assistance in arrangements for our director, Dr. Jas. L. Smith. Nine countries were visited.

I cannot omit recognition of the reception and cordiality accorded our modest group. The clinical programs, almost invariably fascinating, and the carefully planned demonstrations afforded so inestimable profit that detailing should be done instead of brief description with much omission in this resume' of a three months' tour.

The opportunity was afforded for comparison of procedures of several men, famous for their accomplishments in particular subjects of surgery.

At the outset, we met with a disappointment. A storm at sea so belated our arrival, that it deprived us of a three-day clinic, provided by the distinguished Orthopedist of Liverpool, Sir Robert Jones, whose wireless communications were the most we were privileged to receive from him. The Edinburgh dates of our schedule required us to proceed thence, where Sir Harold Stiles arranged the programs.

Sir Harold Stiles is successor to Lord Lister. He was the first to use the paraffin method of fixation in the preparation of surgical specimens, the gum and sugar method having been in vogue previously. He said he obtained the idea from an assistant, who had returned from Naples, where he had studied embryology. His sharp dissection with a scalpel is most impressive. He has a trick of winding long catgut for tying caught vessels, around his left ring finger. We did not see a needle holder used in his clinic. (One rarely sees this instrument in Great Britain, as a Peasley needle is commonly used for wound closure.) He said he fears catgut and uses no chromic, which seems to be another characteristic of Great Britain. The catgut used is iodized. Skin was usually approximated with metal clips.

To maintain continuity of assistants in the Edinburgh Clinic, there has been created a position known as clinical tutor. It is a permanent

position, and this man is first assistant. The house surgeons serve for five months.

The interest of this great surgeon in the pathology of the breast and supernumary ribs was indicated by his discussion of these subjects. In dealing with breasts, malignant or probably malignant, he said he was always radical and preferred to err in that direction. He stated that he believed in narrow skin and wide fascia dissection. He made a point of always placing the wound anterior to the axilla. His dissection of the upper flap reaches to the opposite margin of the sternum and clavicle and of the lower to a point posterior to the anterior margin of the latissimus dorsi. The amputation of pectorals start with the insertion. All fascia, including that of the upper rectus, is removed. He emphatically stated he believed in the heredity of cancer and that malignant lesions were predisposed.

In his discussion of cervical ribs, he stated that 1 to 2 per cent of all individuals have this anomaly and that nerve pressure occurs in 5 to 10 per cent of the cases. Symptoms are observed in prefixed and postfixed cervical plexuses. A first rib may cause the same symptoms, with or without the presence of a cervical rib and may require removal as well. Embryology explains these anomalies by the fact that the nerve development preceeds bone development and the plexus is sometimes found on unusual levels. In an illustrative case, incision was made along the anterior margin of the scalenus medius and a beautiful anatomical dissection made. The cause was shown to be a large, tough, fibrous band from the cervical rib. The band and rib were removed. The band was posterior to the 5th nerve root and caused enlargement of the nerve.

The point made in a gastroenterostomy for duodenal ulcer was the opening of the gastroduodenal omentum and doing the anastomosis by bringing the stomach and jejunum through this opening. He offered that the advantage was greater ease of bringing the operative field onto the surface of the abdomen.

He also did a complete laryngectomy and glossectomy through a combination midline and transverse anterior neck incision for a carcinoma of base of tongue with erosion of epiglottis in a patient of 58 years.

Professor Meekin, in a demonstration of the duodenal tube, stated that he thinks he can demonstrate the type of bile and sometimes the site of the infection. The first flow of bile comes from the common duct, the second from the gall bladder and the third from the hepatic ducts. He uses magnesium sulphate solution to increase the bile secretion. He suggests this procedure for treatment in acute jaundice.

One of the most valuable and appreciated demonstrations of the tour was given by Mr.

David Greig of the Royal College Museum of Edinburgh. He has been a surgeon all his life with keen interest in specimens and is now retired from practice to be curator. The following remarkable and rare specimens were shown.

1. Bifid tongue, complete anterior, showing three sources of origin in embryological development.
2. Horns, sole of foot—mental defective. (Ichthyosis).
3. Asymmetry of head. (a) Pressure—obstetrical trauma. (b) Developmental.
4. Ateleosis.
5. Deformed pelvis—Congenital.
6. Tibia—Large bone cavity. This patient, a seaman, had a discharging sinus for years. He plugged it with wood, removed the cork and evacuated the pus as necessary.
7. Perforated skulls—Metastatic carcinomas from: (a) breast; (b) stomach; (c) frontal sinus erosions—epiblastic growths; (d) maxillary sinus—(no outgrowth of bone): 1. orbit; 2. illium.
8. Bilateral dislocation of hips—(skeleton) large outlet. 16 pregnancies—10 living.
9. Intracranial osteogenic overgrowths. (Frontal fossa is starting point. Suggested to occur in puerperium and when recumbent position is maintained a long time. 2 cases—78 years and 82 years.
10. Overgrowth of bone—inherited syphilis—2 cases.
11. Skull of deaf mute—No auditory meatus, (no auricle or eustachian tube.

For his easy, pleasing style, extraordinary power of description and ready command of language, I have long regarded Sir Berkley Monyhan as the greatest orator of the surgeons of our time, as well as one of the greatest of contributors to the literature of abdominal surgery. In his operating room, for the first time, I found new pleasure in observing and listening to the man at work. His movements are not fast, but purposeful, making progress of the operation continuous.

For gastric ulcer, he said he had come to routinely do a gastrectomy, which he does by an anterior gastro-jejunostomy, using a short loop of the jejunum. He stated that this gastrectomy for stomach ulcer is the most satisfactory of abdominal operations, and his mortality is 1.6 per cent. He uses linen without ulceration in his experience. The evolution of his experience in this disease, he said, was first, posterior gastro-jejunostomy, after which vicious vomiting sometimes occurred. An experience with a jejunal growth developed the procedure of anterior lateral application of jejunum to the stomach end together with end of the duodenum to lateral jejunum below. Generally applied, this required too long an operation, hence the above described technique of applying a short loop of jejunum anteriorly to the cut end of the stomach has become the method of choice.

In the diagnosis of stomach ulcer, he said he depended upon the X-ray and not on the history. The "nitch" and the "notch" as he illustrated by lantern, are the determining signs. For a duodenal ulcer, he did a posterior gastro-jejunostomy, infolded the base of the ulcer, ligated a vessel leading towards the ulcer and sutured an adjacent piece of omentum over the repair. A bound down, buried appendix with glands suggested tuberculosis. His comment was that a detached piece of terminal appendix is not often mentioned, but is possible.

When Monyhan waited on account of the straining of the patient, he remarked, "Every pull gives a pain." "Never quarrel with a patient asleep or awake."

Some general remarks by Sir Berkley de-severe relating. The infected appendix and lymphatics of the ileo-colic angle communicate to the lymphatics of the greater curvature of the stomach, producing what he has termed the "blushing pylorus," which is a lymphangitis or as he has called it, "the mimicry of a gastric ulcer."

In the discussion of infection of the gall bladder, he said cholecystectomy should always be done with one exception, which is in the case of the single cholesterol stone which is not accompanied with infection and may be definitely diagnosed by the radiating lines in the single shadow of the X-ray and by cholesterol estimation from the blood. Cholecystectomy should only be done in this instance. The infected gall bladder may arise through:

1. Lymphatics—Outer wall.
2. Blood—Submucosa.
3. Bile—Mucosa.

Because the gall bladder wall is without much muscle, infection is not expelled.

Deposit of fat, as is seen on the wall of an infected gall bladder, about the base of an ulcer or about an infected appendix, indicates attempted protection.

Monyhan called attention to the single stitch method for colotomy. He described a technic to provide for complete rest of the stomach. After a gastroenterostomy is done, the loop may have a lateral anastomosis. A tube may be passed through the wall of the proximal gut and on through the anastomosis, opening into the distal gut and feeding may be done through this tube so that all nourishment administered, passes directly into the jejunum. When the tube is removed, the track soon closes.

In Monyhan's clinic, we were provided with cap, mask, gown and leggings. The last are required as the result of an experiment. *Bacillus prodigiosus* was placed on the trouser legs of individuals, who walked around the operating room three times. The 25 or 30 agar plates placed about the room, all showed growths.

Nurses in the Leeds Infirmary receive a four years' training and for one more year, a degree of N. D. is given from the University. The latter provides special training for those nurses who hope to occupy executive position.

In the great medical center of London, we became indebted to more surgeons and institutions than the limitations of this brief report permit including. Sir John McAllister, president of the Royal College of Physicians, had so filled our program that we could not get around to all that had been arranged. St. Bartholomew's, Guy's and St. Thomas hospitals, all founded in the eleventh and twelfth centuries, are more interesting for their antiquity than could possibly be hoped for in present day accomplishments.

A great variety may be seen in London, even including methods and procedures, modern and ancient. We probably saw every kind of anaesthetic in use; every degree of dress for the surgeon from street clothes or rubber boots to the cap, gown and gloves; the exposed patient and patent heating devices during operation and we entered operating rooms with or without protection, which in one instance, was solely the wearing of galoshes.

One of the most interesting days of all was the one we spent in the Royal College of Surgeons Museum with the President, Sir Anthony Bowlby, the curator, Mr. Keith, other officers and gentlemen of the college as our hospitable hosts. The enormity of this museum cannot be comprehended without visiting it and then, I fear, inadequately. The original purpose of the museum was to represent interest in all life; it has been necessary to reduce interest to man only. It contains John Hunter's specimens and furniture. A few of the subjects which particularly attracted the writer's attention were:

1. Trephined Neolithic Skull.
2. Large series of gas pulmonary lesions.
3. Large series of war wounds of face.
4. Acromegaly complete.
5. Dwarfism complete.
6. Mummy 4000 B. C.
7. Overgrowths.
8. Atrophies.
9. Anomalies.
10. Periodic characteristics.
11. Hunter specimens.
12. Hunter furniture.

The Radium Institute of London appeared to be the center for the use of the therapeutic agent, radium. Many surgeons send patients to this institution when radiation is prescribed and many patients on their own account, apparently come there for advice and treatment. The director who gave us an afternoon, said that his belief in the use of radium was for inoperable conditions or

for the supplement of surgery. He said that the policy of the institution was to refer all operable lesions to a surgeon and radiation might or might not follow according to the opinion of the surgeon.

Dr. Shoemaker, of the Hague, whose paper at the Philadelphia Congress in 1921 was a plea for non-deforming operations in the abdomen or especially, end to end anastomosis in gastric and intestinal resections, demonstrated in a group of cases, the ease of this procedure in his hands. His clamp is the important feature of the technic in the end to end anastomosis of stomach and duodenum and the closed method of approximating either small or large gut ends in intestinal resection. He uses scissors for many purposes, puncturing, separating, directing and dividing. There were no rubber protectors on the intestinal clamps. He wears white cotton gloves over rubber gloves. He lifts the peritoneum with cotton gloved fingers in entering it and holds intestines more easily and gently. He is one of the great intestinal surgeons who deftly executes the principles he writes and talks about, many of which seem to be independently developed from his own experience.

Professor Pierre Duval provided for our exceeding pleasure and profit in Paris. Simplicity impresses one in his operating room. He uses one assistant and no scrubbed nurse. A slab table is close at hand and from this, he reaches directly for instruments from a tray and for sponges and packs from containers. In intestinal anastomosis, he used the alateral method without clamps.

Professor Tuffier demonstrated bone graft method of which he is the author, in fixing diseased joints as the knees, sacro-iliac and hip. He said that the point was to get all of the graft buried within bone so that the periosteum may cover.

In the clinic of Proust, the following was said on the use of radiation: for large, bleeding fibroids use X-ray 40 cm. spark gap for one and one-half to two hours every other day for four or more doses; for small bleeding fibroids, use radium in small dosage for several days and for the cases between, use surgery. In a case of sarcoma of the ribs, 3-5 mg. needles were left buried for six days. A similar time and dosage was employed in a carcinoma of the cervix.

At the Curie Institute for research, they advocated in deep therapy frequent dosage (every couple of days) and in the use of radium 80 millicuries or 110 mg. left in place for a long time (6 days). For instance, in the use of the latter in the vagina, it was suggested to divide the dosage into three needles.

At Berne, the hospitality of Professor de Quervain and his colleagues could not be surpassed. As the successor of Theodore Kocher, his interest in the thyroid subject is also great. His method of first attacking the blood supply in the large, engorged goiters, so numerous in Switzerland, has added to his renown. He stated that at Berne, the prevalence of enlarged thyroids at 7 years is 74 per cent, and at 60 it is 93 per cent. Fifteen per cent of all operative work in the Berne clinic is thyroid surgery. Graves disease is rare in Switzerland. There were only two cases in the hospital when we were there. Prophylaxis in the schools is an important work. It is carried out in this way: 1-3 mg. of K. I. is used starting at 7 years of age; 40 to 80 mg. is given in a year. This work was first started in France in 1860. An extraordinary group of individuals were presented, representing various types of dwarfism, resultant from thyroid and allied glands disturbance. The deafness, so common, he said he believed due to cerebral etiology.

Through a collar incision, he approaches the gland through two oblique incisions, parallel and near the anterior margin of the sterno-cleido-mastoid muscle. Both inferior and one superior thyroid arteries are ligated and then all other vessels in sight. V incisions are made to remove the excess gland.

This technic is not applicable in the usual thyroidectomy in Michigan, because the glands in Switzerland are not hyper-active. In general, the danger there is the removing of too much gland and here, of not removing enough.

I am told that William J. Mayo once said that Professor Raffaele Bastinelli, of Rome, is the greatest surgeon on the European continent. In expressing my estimate of the man, I will say that if I had required immediate surgery while in Rome, I would have submitted myself to Bastinelli with every confidence. His dignity, his gentleness, his earnestness and the restrained judgement coupled with deliberate manipulation in operating, won the expressed esteem of all of us. His operating room resembles the American. He uses local anæsthetic frequently for all abdominal operations. On entering the abdomen, he explores thoroughly, first. He prefers not to use clamps in doing stomach or gut anastomosis and he ties all bleeding points. He uses plain catgut throughout and believes it is wise to use it particularly in suturing the cucosa in gastroenterostomy to avoid jejunal ulcer which he thinks is common. For

duodenal ulcer, he does a posterior gastro-jejunosomy and for stomach ulcer an anterior lateral anastomosis of a long loop of jejunum to the cut end of the stomach.

In removing the kidney, he said that for years he has been of the habit of dissecting the capsule, applying separate clamps for separate tying of each vessel.

In inguinal herniotomy, he resects the cremaster muscle which he uses to cover bulging peritoneum.

In splenectomy he ligates each vessel and objects to clamping the pedicle.

The economic chaos almost excluded the Austrian clinics from our plans. In Germany too, unexpected difficulties made prearrangement for visiting clinics apparently impracticable. In one instance, we were visited the night before to be told of the hospitable arrangements that had been provided, but that we should in turn sign a statement that we would aid in every way to re-instate Germany in America. We did not attend the clinic.

Benefit from a clinical tour does not lie, I think, in the large accumulation of new ideas nearly so much as is gained from observing that a single accomplishment may come about through a score or more of methods. In other words, a condition may be handled many ways, almost equally well.

The contrast between European surgery in general and American surgery lies in this idea, in my opinion: American surgeons are eager for the new and when something is proven better than the old, the old is abandoned. I was frequently told that our advancement came about because of our abundance of money. At any rate, I saw in Europe, many practices which I knew had been common practice of American surgeons but abandoned many years since. On this account, I venture to offer a warning to the recent graduate who is planning his developmental years. The danger of improper selection of ideas as many times greater in Europe than in America. One brief illustration is a young man who, after three years in Europe, told me that he was bringing back with him, a quantity of a certain linen for buried sutures and ligatures.

However, we must not be so proud of our advanced status, that we forget the wisdom of the ancients. On the Palatine Hill in Rome, I was shown by the Professor of Archeology of the University of Rome and of London Polytechnic, Luigo Tambolini, a filtration system built 900 B. C. In the Capitoline Museum, there is a statue labeled Giovane Satire 200 B. C., which is the figure of a male with a goat. There are wounds

in the goat's neck and on each side of the human neck, a gland is applied. Tambolini told me that this is said to be a product of the Alexandrian School. Endocrinology is the most modern subject of medicine but here is evidence that glands of internal secretion were receiving some form of consideration more than two thousand years ago.

THE KAHN PRECIPITATION TEST FOR SYPHILIS*

ROBERT G. OWEN, A. M., M. D.

H. E. COPE, B. S., M. D.

DETROIT, MICHIGAN

Ever since the announcement of the Wassermann test in 1906, numerous investigators have occupied themselves with the question of improving the technic or of finding a more simple yet reliable method of detecting the presence of syphilitic infection by an examination of the blood.

Complement fixation methods are laborious and time consuming and possess many inherent sources of error which must be constantly guarded against if the results obtained are to be of clinical value, and while the result of the many refinements and improvements, culminating in the new standardized Kolmer method, has been to give us methods of great accuracy, these newer methods are more cumbersome and time consuming than the old, though undoubtedly far more accurate when properly performed and carefully controlled.

The endeavor to devise a simpler method than the Wassermann reaction for the detection of syphilis started with the work of Fornet and Schereschewsky in 1907, but the first results at all comparable were obtained with precipitation methods by Meinicke in 1917, and Sachs-Georgi the following year. Both methods depend on the production of a precipitate when syphilitic serum and specially prepared antigen are mixed under certain conditions and require from 24 to 48 hours for the completion of the test. There have been numerous refinements of the original method, especially abroad, but the general opinion is that none of these methods will check with the Wassermann reaction in more than 80 per cent of the cases and that the divergence is entirely in favor of the latter method.

In 1922, R. L. Kahn (1) published his modification of the Meinicke method and from time to time since then has suggested variations of his original technic which have tended to increase the accuracy of the results while making the performance of the test more simple and rapid.

*From the Serological Department of the Owen Clinical Laboratory.

We tried out Kahn's original method and have also tested most of the newer procedures suggested by him, but until we undertook the present study we did not find that our results were at all comparable with the Wassermann test.

As the percentage of agreement between the Wassermann and Kahn tests depends largely on the complement-fixation method employed, especially as regards antigens and the time and temperature of the fixation period we give our Wassermann technic below.

WASSERMAN TECHNIC

Total volume, 2.5 c.c., using 0.1 c.c. of serum inactivated 15 minutes at 56°C.

We use the antishoop hemolytic system with 2 units each of complement and of amboceptor as determined by daily titration of complement for 30 minutes in water bath.

As antigens we employ 3 plain alcoholic extracts of beef heart so diluted that the dose employed is at least 1/3 of the hemolytic or anti-complementary amount, while at the same time 1/10 of this daily dose must give complete fixation with a strongly positive serum.

The preliminary fixation is carried out in the ice-box at 6-8°C. for 15-18 hours and with this long fixation period the plain alcoholic extracts give almost as high a percentage of positive results as do the cholesterinized antigens and at the same time avoid the false positives which the cholesterinized antigens undoubtedly give at times.

For complement we use the pooled sera of several guinea pigs preserved with an equal volume of 8.5 per cent salt solution and kept in the ice box. Before use this complement is diluted with distilled water to make a 10 per cent solution in 0.85 per cent salt.

We find that such salted complement keeps its strength for at least 7 to 10 days and enables us to use pooled sera and also obviates the necessity of having to keep guinea pigs constantly on hand, our supply being purchased only as needed.

All of our tests have been run with Kahn's (2) latest modification, the full details being found in his latest publication.

While a considerable amount of literature on the Kahn test has accumulated it is difficult to evaluate it properly at this time, as nearly all the tests so far reported have been run with one or another of Kahn's older methods which are not as accurate as the present one, and moreover the comparisons have been made with a large number of variations of Wassermann technic and as will be noted the percentage of agreement depends largely on the sensitivity of the Wassermann system employed.

Young (3) reported 5,080 sera with agreement of 93 per cent and with 37 sera negative

with Wassermann reaction, but positive with Kahn, and 14 Wassermann positive, Kahn negative sera, these 51 bloods being from syphilitic patients.

Keim & Wile (4) consider the Kahn test to compare favorably in sensitiveness with the Wassermann reaction, while possessing the advantages of simplicity, rapidity and reduction of errors due to the hemolytic system.

Dulaney (5) obtained identical results in 87 per cent of 900 cases. She found 26 Wassermann positive, Kahn negative sera and 23 Kahn positive, Wassermann negative, these 49 sera all being from clinically syphilitic patients.

She finds the Kahn slightly more sensitive with treated cases than the Wassermann reaction, but says that she at times finds some slight precipitates which do not accord with the clinical findings, but recommends the test as a valuable check on the Wassermann reaction.

Holmes (6) reports 90.4 per cent of complete agreement in 1,000 cases, with 25 positive Wassermann reaction and negative Kahn and 71 Kahn positive, Wassermann reaction negative sera. She considers the Kahn more sensitive, especially in treated cases. It should be noted, however, that she used a 1-hour water-bath fixation method for her Wassermann reaction, this method being much less sensitive than the ice-box technic.

Fox & Sanderson (7) made 1,000 tests on 915 patients with an agreement of 89.6 per cent. Using an 18-hour ice box fixation method with both plain and cholesterinized antigens, they found 25 Wassermann reactions positive, Kahn negative results and eight where the results were reversed. Three clinically negative, septic cases gave positive Kahn and negative Wassermann reaction.

With untreated cases agreement was even higher, but the treated cases often showed complete or partial fixation with the Wassermann reaction while the precipitation test was frankly negative.

They consider the Kahn test about the equal of the 1-hour water-bath method and less dependable than the 4 or 18 hour ice box fixation methods.

They feel that the Kahn test is not as valuable as the Wassermann reaction, but that it possesses decided merit and is of particular value:

1. Where the Wassermann reaction is doubtful or weakly positive.
2. Where the Wassermann reaction is persistently anti-complementary.
3. In emergency cases where an immediate Wassermann reaction is not available.

Osmond and McClean (8) found 77.8 per cent of complete agreement in testing 500 sera

with 4.8 per cent in favor of the Wassermann reaction and 17.4 per cent in favor of Kahn.

Hartman and Reyner (9) using the Kolmer technic compared 863 specimens of blood and found 25 per cent more positive results among syphilitic patients with the Wassermann reaction than with the Kahn test.

Wilson and Nedley, (10) working in the Wassermann laboratory of the New York City Board of Health, obtained an agreement of about 82 per cent in testing 480 suspected cases and of 98 per cent among 390 control cases.

They found the Kahn to give a slightly higher percentage of positive results in both classes of cases. In addition they report 5 normal maternity cases positive by Kahn and negative with the Wassermann reaction.

Rockstraw and Bent, (11) reporting 1,022 cases, found an agreement of 96 per cent using cholesterinized antigens with 1-hour water-bath fixation and of 92 per cent when using a 4-hour ice box Wassermann reaction with plain antigens. Comparing the cholesterinized antigen with the Kahn they show 2.0 per cent of results in favor of the Wassermann and 1.1 per cent in favor of the Kahn.

They conclude that the Kahn is more sensitive than plain alcoholic antigens with 4-hour ice box fixation and less sensitive than 1-hour water-bath fixation using cholesterinized antigens.

The results obtained with spinal fluids were not satisfactory when the Kahn method was applied.

Ide and Smith (12) found 100 per cent of agreement among 2,165 sera when ++ to ++++ results only were considered, and they recommend the Kahn as a check on the Wassermann reaction.

Detwiler (13) obtained an agreement of 94.2 per cent in testing 1,540 patients with 51 Wassermann reaction positive, Kahn negative cases and 39 Wassermann reaction negative, Kahn positive cases.

He considers the Kahn test as not the equal of the Wassermann reaction, but advises its use as a routine check.

Grant (14) using the human blood cell system with plain alcoholic and Noguchi antigens got 97 per cent of agreement, with the Kahn showing to better advantage than the Wassermann reaction in five cases, but as he only had 17 possible luetics among his cases his results are not of much value.

Havers and Taylor (15) employing the Kolmer method, got complete agreement in 90.3 per cent of 1,395 sera and a relative agreement in 92.7 per cent. There were 55 cases positive to the Wassermann reaction and negative to the Kahn and 40 with negative Wassermann reaction and positive Kahn.

At present, when the two tests do not agree, these authors do not know just what importance to attach to the Kahn positive results.

Strumia, (16) testing 624 sera with the Kolmer and Kahn methods found 83.4 per cent of agreement, with 12 cases positive by Wassermann reaction and negative with Kahn and 74 cases gave negative Wassermann reaction and +— or + Kahn.

He considers that the Kahn test should never be used alone, owing to its tendency to give some false positive results.

Moody, (17) using a ring method modification of the Kahn test and examining 1,500 sera obtained agreement in 98 per cent of his cases with 14 cases positive to Wassermann reaction and negative to Kahn and 3 cases showing the reverse.

Keim (18) in a very thorough and complete comparison of the two tests with especial reference to the clinical condition reports on 1,000 cases, the first 350 examined with one of Kahn's older methods and the last 650 tested by a method practically identical with Kahn's latest modification. His Wassermann technic comprises the use of both 18-hour and 1-hour ice-box fixation, using cholesterinized antigens in both cases.

He considers Kahn's latest modification to possess a higher degree of sensitiveness and to be just as specific as the older methods and moreover to possess the advantage of greater rapidity of reading.

However, he did find some faint precipitates in non-specific cases. There were 10 cases with positive Wassermann reaction and negative Kahn, and 12 with negative Wassermann reaction and positive Kahn.

From the clinical standpoint he summarizes his results as follows:

Primary syphilis—Kahn just as sensitive and possibly more so than Wasserman reaction.

Secondary—All tests positive.

Tertiary:

Osseous system—Kahn more sensitive.
Visceral system—Kahn less sensitive.
Cutaneous—Tests about the same.

Cerebrospinal—Kahn compares favorably with 18-hour fixation Wasserman reaction, better than 1-hour fixation method.

Congenital—Same results as with cerebrospinal syphilis.

Latent—More dependable than the Wassermann reaction.

Non-syphilitic cases—5 false positives with Kahn test and 1 false positive with the Wassermann reaction.

We have summarized the results of these various authors in the table below:

Author	Wassermann	No. of Cases	Agreement Per Cent	W.R. pos. Kahn neg. Per Cent	W.R. neg. Kahn pos. Per Cent
Young	1 hr. W. B., C. A. 4 hr. I. B., P. A.	5080	93	0.3	0.75
Dulaney	* C. A.	900	87	2.8	2.5
Holmes	1 hr. W. B. *	1000	90.4	2.5	7.1
Fox & Sanderson	18 hr. I. B. C. & P. A.	1000	80.6	2.5	0.8
Osmond & McClean	Kolmer	500	77.8	4.8	17.4
Hartman & Reynor	1 hr. W. B., C. A. 4 hr. I. B., P. A.	863	75	2.5	0
Wilson & Nedley	1 hr. W. B., C. A. 4 hr. I. B., P. A.	870	87	2.4	9.1
Rockstraw & Bent	1 hr. W. B., C. A. 18 hr. I. B., C. A. 18 hr. I. B., K. A.	1022	94	2.6	1.1
Idle & Smith	* C. A. N. A.	2165	100	0	0
Detweiler	Kolmer	1540	94.2	5.8	2.5
Grant	* P. A.	170	97	0	3
Havers & Taylor	Kolmer	1395	92.7	3.9	2.8
Strumia	* P. A., C. A.	624	83.4	1.9	0
Moody	18 hr. I. B., C. A. 1 hr. I. B., C. A.	1500	98	0.9	0.2
Keim	* Antigens or fixation time not given. C. A.—Cholesterinized Antigen. P. A.—Plain Alcoholic Antigen.	1000	93	1.0	1.2
W. B.—Water Bath. I. B.—Ice Box.					N. A.—Noguchi Antigen. K. A.—Kolmer Antigen.

Our own experience with Kahn's latest modification of his precipitation test comprises the examination of sera from 2,000 patients. Whenever there was a wide divergence in the results of the precipitation and Wassermann tests we repeated the examinations on the same specimen and when possible secured another specimen from the same source.

We found Kahn's new method much more reliable than the older ones and in addition it possesses the great advantage of rapidity in reading the results.

However, while it is comparatively easy to determine the presence or absence in any one tube and relatively simple to say whether the precipitate represents a + or ++++ reaction, we find that with three of us reading the results that we differ quite widely on many specimens as to whether to call the precipitate a ++ or +++ reaction, but after all this does not materially affect the value of the test and a greater experience may lead us to more uniform readings.

We have also learned to attach but little significance to precipitates which can not be distinguished easily with the naked eye, as in our experience it is not at all uncommon to find

minute precipitates in the sera from normal individuals and this same observation has been made by a number of other investigators. In other words, we feel that but little significance should be attached to such +— and + reactions in using the precipitation test.

Moreover, we find that in making up different lots of diluted antigen that at times we get a batch that tends to give false precipitates so it is just as necessary to carefully control this test as it is the Wassermann, and whenever we get a number of weak precipitates in a certain series of tests we feel the necessity of repeating the run with another lot of freshly made antigen.

In our series of 2,000 cases there were 1,781 (89.5 per cent) which checked absolutely with the Wassermann reaction and if we group the + + + +, + + + and negative reactions together we get what might be called a "diagnostic check" in 1,811 (90.5 per cent) of the cases.

All untreated cases of active syphilis gave uniformly positive results with both methods as was to be expected, but when we took up the question of treated cases a wide diversity of results was found ranging from + + + + or + + + with one method and negative with the other, to lesser degrees of divergence.

Examining only those cases where one method showed a reaction of diagnostic strength (+ + + + or + + +) while the other was of lesser degree, we find 105 cases grouped as follows:

Wassermann + + + + or + + +, Kahn 0	10 (0.5 %)
Wassermann + + + + or + + +, Kahn +	19 (0.95%)
Wassermann + + + + or + + +, Kahn + +	30 (1.5 %)
Wassermann more strongly positive than Kahn	50 (2.95%)
Kahn + + + + or + + +, Wassermann 0	16 (0.8%)
Kahn + + + + or + + +, Wassermann +	13 (0.65%)
Kahn + + + + or + + +, Wassermann + +	17 (0.85%)
Kahn more strongly positive than Wassermann	46 (2.3 %)

While the question of the variation of the strength of the reaction obtained with the two methods is of interest yet in our opinion the great significance of these results lies in the fact that there were 10 cases with strongly positive Wassermann reactions and negative Kahn on the one hand and 16 where exactly the reverse was true. In other words, had dependence been placed on only one method of examination, from 0.5 to 0.8 per cent of the positive results would have been missed.

The 26 cases showing marked divergence are tabulated below and it will be noted that 9 of the 10 Wassermann positive, Kahn negative cases give a definite history of treatment.

Among the 16 Kahn positive, Wassermann negative cases, there were 3 where we were unable to obtain any history.

Case 3809, a chancre of 2 week's duration with *Treponema pallidum* present, apparently shows an earlier reaction with the Kahn than is obtained with the Wassermann, but an extended series of observations of such primary cases has failed to corroborate this belief. This series of primary cases we expect to report later.

Case 4293, a patient with a sore clinically chancroid, with a negative dark field and repeatedly negative Wassermann reactions extending over a period of 64 days after the appearance of the sore, gave a + + + + Kahn at the first examination, a + + at a subsequent test and | at the time of the final examination. There was no history of any previous infection. With several other sera we have likewise found a very definite precipitate at one examination and none when the test was repeated, so we feel that with the Kahn as well as the Wassermann reaction it is possible to get false positives due to some technical error.

Wassermann + + + + or + + +, Kahn negative.

- 3788—Treated. Chancre 2 mos. ago. 2 mos. later both K and W neg.
- 3796—Treated. Wife shows + + + + Kahn and Wassermann.
- 3901—Treated.
- 3960—Treated.
- 4018—Treated.
- 4108—Treated.
- 4519—Treated.
- 4612—Treated.
- 4673—Treated.
- 5365— ?

Kahn + + + + or + + +, Wassermann negative.

- 3224—Treated.
- 3544—Treated.
- 3709—Chancre 2 weeks T. P. present.
- 3668—Treated.
- 3720—Treated.
- 3918—Treated.
- 3937— ?
- 3938— ?
- 4043— ?
- 4311—Treated.
- 4279—Treated—after further treatment gave K + + + W + +.
- 4293—Sore 50 days clin. chancroid. No T. P. denies previous infection. 1 week later, K. + +, W. 0. 64 days—Wass. 0, Kahn +—
- 4345—Treated case.
- 4383—Treated.
- 4443—Treated.
- 5193—Treated.

TABLE II.
Summary of 2,000 Kahn and Wassermann tests.
Wassermann

	xxxx	xxx	xx	x	0
* x x x x	233	8	9	4	5
x x x	22	12	8	9	11
x x	28	2	12	6	12
x	9	10	7	9	45
0	8	2	7	7	1515

*Kahn.

We feel most strongly that the Kahn test as at present developed should not be used as a substitute for the Wassermann reaction, but that its use as a simple and rapid check on the Wassermann reaction is of great value and where we have a whole set of positive or negative sera in a days run the corroborative value of an accompanying Kahn enables us to report our Wassermann results with an assurance of technical accuracy hitherto lacking.

Moreover, as shown above, there are undoubtedly some treated cases which will show positive Kahn reaction and negative Wassermann tests, but exactly what significance to attach to such results as regards further treatment must be left to future clinical investigation.

Certainly such cases should be subjected to close clinical scrutiny and further serological study.

CONCLUSIONS

1. The results obtained with the Kahn and Wassermann tests by different observers depend largely on the Wassermann technic employed.

Where the 1-hour preliminary fixation Wassermann method is used the Kahn gives a much higher percentage of positive results, but with the more recent 4 to 18-hour ice box fixation methods using plain or cholesterinized antigens the results obtained by different observers check very well.

Practically all observers find a certain small percentage of cases which are positive with the Wassermann and negative with the Kahn and likewise a certain number giving strongly positive Kahn tests and negative Wassermann reactions. This divergence is confined almost exclusively to treated cases.

Using an 18-hour ice box fixation method with plain alcoholic heart extracts we obtained a practical check in 90 per cent of 2,000 cases.

Where the two methods check we feel a much greater assurance in reporting our results than we formerly had.

Where the results show a radical difference we always repeat the tests with both methods before reporting the results and in this way endeavor to eliminate any technical error which may be present. If a check is again lacking we endeavor to secure another specimen before making a final report.

We find that a not inconsiderable number of sera may show very slight precipitates and consequently do not attach much importance to +— and + reactions as obtained with this test.

Owing to the delicate balance of the antigen salt solution mixture careful controls of the Kahn method are just as essential as those used in the Wassermann test.

From our experience to date we would most certainly hesitate to place the same reliance on the Kahn method that we do on the Wassermann except in the case of frankly negative or strongly positive reactions.

The occasional use of the Kahn test by technicians who lack the proper facilities for positive and negative controls and who are not running a number of bloods at one time where by some check on the test is obtained is just as full of pitfalls as the use of the Wassermann test under the same conditions.

REFERENCES

1. Kahn, R. L.: Arch. Dermat. and Syph., 1922, V, 579. Ibid, 1922, V, 734.
2. Kahn, R. L.: Am. Jour. Public Health, 1924, June. Ibid, 1922, VI., 332.
3. Young, C. C.: Jour. Am. Med. Assn., 1922, LXXIX, 1674.
4. Keim & Wile: Jour. Am. Med. Assn., 1922, LXXIX, 870.
5. Dulaney, A. D.: Am. Jour. Public Health, 1923, XIII, 472.
6. Holmes, Janet: Jour. Am. Med. Assn., 1923, LXXXI, 294.
7. Fox & Sanderson: Am. Jour. Syph., 1923, VII, 687.
8. Osmond & McClean: British Med. Jour., 1924, I, 617.
9. Hartman & Reyner: Jour. Am. Med. Assn., 1924, LXXXII, 196.
10. Wilson & Nedley: Jour. Lab. & Clin. Med., 1924, IX, 704.
11. Rockstraw & Bent: Jour. Lab. & Clin. Med., 1924, IX, 634.
12. Ide and Smith: Arch. Dermat. and Syph., 1922, VI, 770.
13. Detwiler, H. K.: Jour. Am. Med. Assn., 1923, LXXXI, 815.
14. Grant, M. S.: Jour. Lab. & Clin. Med., 1923, VIII, 468.
15. Havers & Taylor: Am. Jour. Pub. Health, 1924, April.
16. Strumia: Arch. Dermat. and Syph., 1923, VIII, 8.
17. Moody: Jour. Am. Med. Assn, 1923, LXXX, 383.
18. Keim, H. L.: Am. Jour. Syph., 1924, VIII, 323.

MODERN CONCEPTIONS OF HEART
DISEASE*

GEORGE R. HERRMANN, M. D.

ANN ARBOR, MICH.

Within the last decade and a half our knowledge of heart disease has been greatly augmented by the vigorous application of all the advanced methods of the fundamental sciences. The conceptions of the etiology, of the anatomical and functional changes, and of the effects of drugs have been altered, but at the same time made definite and logical. Much of the data elicited by the methods of precision has found direct clinical application and has made possible the accurate bedside diagnosis and treatment of practically ninety per cent of all cardiac cases.

The patient's *history*, carefully taken, reveals much of the information as to the etiological factor that might be at the bottom of the disturbance. In this connection we inquire carefully as to whether or not the patient has suffered from "growing pains" in childhood, repeated attacks of tonsillitis, acute rheumatic fever, chorea, or any other severe infectious disease, syphilis, or toxic goitre.

The symptomatology is, however, quite important in diagnosis, especially in individuals with paroxysmal attacks of breathlessness, palpitation, syncope, cyanosis or cardiac pain. The details of the time of onset, character and duration of any symptoms are indispensable. Furthermore, the limitations of the patient's activity are, in most instances, accurately defined in the history, and the functional state of the cardiac muscle; that is, the type and degree of heart failure is, as a rule, quite evident. The history, however, except in occasional cases of angina pectoris, is by no means the final evidence upon which conclusions are based as the facts are of a subjective nature.

The *physical examination* reveals the objective signs to corroborate or invalidate the conclusions drawn from the history, as to the etiology, the functional efficiency, and the probable anatomic lesion of the damaged heart. The patient's general condition is established by careful general inspection. The skin and mucous membranes are examined for petechiae. The signs of cardiac failure, such as orthopnea, cyanosis, engorged neck veins, oedema and congestion of the liver are promptly looked for. Then a detailed study of heart and blood vessels is made, noting any abnormal pulsations, thrills or shocks. The position of the apex impulse is the most reliable clinical or bedside

index as to the size of the heart. Changes in the intensity and character of the heart sounds and systolic and diastolic murmurs are listened for after deep expiration and in various positions. The rate and the rhythm are determined and the effects of vagus or ocular pressure and measured exercise or amyl nitrite upon these are determined. The character of the walls of the peripheral arteries, the pulse and the blood pressure are noted. The lungs and all the serous cavities are examined for fluid accumulation. The liver edge and the spleen are palpated for tenderness, consistency and size, as evidences of the degree of congestive engorgement and consequently the extent of heart failure. The subcutaneous tissues in the dependent parts are pressed for the pitting of oedema. The urine is examined for albumin, casts and red blood cells.

With this routine in mind we can proceed to the study of some of the commoner types of cardiac disturbances, discussing briefly the outstanding significant facts in the etiology, the reliable diagnostic criteria and accepted therapeutic measures.

RHEUMATIC HEART DISEASE

Acute rheumatic fever, the organism of which still remains unknown, is the great cause of heart disease in adolescence and early adult life. The contagiousness of the infection, as pointed out by Garnet, St. Lawrence and others, warrants moderate isolation. The infection is most protean in its manifestations, but usually presents certain characteristics. The acute, usually inflammatory, migratory joint involvement in which subsequently the signs totally disappear and the purposeless movements and grimaces in choreics are typical rheumatic manifestations.

The heart is very susceptible to involvement and in a large percentage of acute cases electrocardiographic changes have been noted by Cohn and Swift. It, therefore, seems rational to institute vigorous treatment with salicylates, which are the nearest to a specific anti-rheumatic drug that we possess. The drug may be given by mouth with alkalis, rectally in boiled starch enemata, subcutaneously, intramuscularly, intrasynovially. Adequate dosage continued for long periods, in the experience of George Dock is our best hope for success in the prevention of cardiac complications and recurrences. During the acute stage 2 to 3 grs. per pound (0.1 gm. per kilo) a total of 150 to 200 grains (10-15 gm.) should be administered daily for at least two weeks after the temperature has become normal and if no intolerance appears, until the joints clear up. In case of intolerance evidenced by cerebral symptoms or hematuria, after a day or two of limitation, the dosage may be gradually stepped up and continued high another two weeks. The dose is then reduced

*From the Dept. of Internal Medicine, University of Michigan.

*Read in part before the Academy of Medicine at Kalamazoo, June 17th, 1924.

And in part before the Genesee County Medical Society at Flint, October 15th, 1924.

to one-half and continued for half a year, and then to one-quarter of the original dose, on which the patient should be kept for a year or two.

The statistics of St. Lawrence in New York on the effect of tonsillectomy on recurrences of acute rheumatic fever, seem to indicate that tonsillectomy is the most important recurrence prevention measure available at the present time. The figures of Hunt and Osman at Guy's Hospital, London, however, do not corroborate this entirely. Although we have not disproven the dictum, "Once rheumatic always rheumatic," we still feel that the above measures are distinctly worth while in the protection of the heart. The acute pericardial, myocardial, endocardial and conduction disturbances in rheumatic fever cannot be gone into in this paper.

The common type of rheumatic heart disease that we see is the healed valvulitis with its progressively contracting scar, producing the typical button-hole or fish-mouth mitral stenosis with some insufficiency or the aortic insufficiency with some stenosis. The pathogenic signs of these lesions will bear repeating.

Mitral stenosis is characterized by the localized apical low-pitched mid or late diastolic rumble, which may be crescendo in type and end in a snapping mitral first sound. An accentuated and often reduplicated pulmonary second sound and an aortic second sound that is distinctly diminished in intensity are characteristic secondary signs. The palpable counterparts of the auditory phenomena are often present in an apical diastolic thrill and systolic shock and a diastolic shock in the pulmonary area. The pulse is small, due to the small pulse pressure. There is usually an accompanying mitral insufficiency which presents an apical blowing systolic murmur that is transmitted to the axilla.

Aortic insufficiency is characterized by a high-pitched early diastolic murmur, usually audible at the aortic cartilage but best heard along the left border of the sternum. The aortic second sound is usually diminished in intensity. The pulse is of a water hammer type, due to a high pulse pressure. The peripheral vessels may throb and a pistol shot sound and the diastolic Duroziez's murmur may be heard over the compressed femoral artery. A capillary pulse which is a secondary phenomenon is usually present. The presence of a loud, rough aortic systolic murmur heard over the aortic area and transmitted into the neck vessels accompanied by a systolic thrill and an anacrotic plateau, or "double humped" pulse indicates an aortic stenosis which occasionally results from rheumatic aortic valvulitis.

These lesions are frequently both present in the same patient and one then finds a combin-

ation of the peripheral vascular phenomena, the picture depending upon which lesion predominates. Tricuspid stenosis and insufficiency accompany the other rheumatic lesions in a small percentage of cases.

As long as there is no irregularity of the cardiac rhythm and no evidence of heart failure these patients need no treatment other than general hygienic measures, advice and reassurance. They should be warned against taking part in competitive athletics and attempting any sudden undue exertion and to quit any task when breathlessness is experienced. The patient should not be kept in bed but should spare his myocardium every strain, for besides the mechanical embarrassment incident to the valve lesion it must be remembered that the heart muscle is always damaged to a greater or less extent in rheumatic fever with valvulitis.

One other danger that the patient with the healed scar of rheumatic valvulitis must be guarded against is the engrafting of a subacute streptococcus viridans endocarditis upon the damaged valve. This susceptibility of scarred heart valves to subsequent endocarditis is strikingly shown in our series of dogs with experimentally produced aortic insufficiencies which can be easily infected and which often developed a streptococcus endocarditis spontaneously, while not one infected valve was found in a control series of 200 dogs taken at random from the pound. Treatment of endocarditis, even with the powerful germicidal dyes is rivanol or acriflavine intravenously, has not been very encouraging. We must, therefore, see to it that our patients with chronic valvular disease have all possible foci of infection, as apical abscesses, septic tonsils, etc., eradicated, and furthermore that they get to bed and call for medical attention with every infection no matter how mild it may seem to be.

Finally, the patients with rheumatic heart disease begin to suffer from cardiac failure and practically all cases with mitral stenosis eventually develop an absolute irregularity with a pulsus deficit, that is, auricular fibrillation. Digitalis is then used, as will be described later, to strengthen the myocardium and control the disturbed cardiac mechanism.

SYPHILITIC HEART DISEASE

Syphilis must involve the heart and great vessels during its acute stage, but signs or proofs for this assumption are still wanting. Nevertheless, every patient with a chancre should be looked upon as a potential chronic sufferer of heart disease or some other late vascular manifestation of tertiary lues and consequently should receive an intensive course of arsphenamine, mercury and iodides.

In time statistics will be available as to the efficacy of this treatment in the prevention of

the late complications of syphilis. At present we are for the most part fairly optimistic in cases that have been adequately treated early and especially those that have not developed the generalized secondary rash, nor a positive complement fixation test. The cardiac complications of tertiary lues are usually latent and manifest themselves ten to twenty or more years after infection.

Aortic insufficiency of a very free type, due to dilation of the root of the aorta is the usual lesion of syphilitic origin. The signs are similar to those given above for aortic insufficiency with the peripheral vascular phenomena much more prominent as a rule. The high-pitched, often musical, early aortic diastolic murmur that is heard in the second right interspace and in the third and fourth left interspaces. The aortic second sound is often entirely replaced but may persist as a liquid, bell-like, hollow, metallic sound. The heart is usually greatly enlarged and the maximum impulse of the powerful apex heave is in the sixth interspace and outside the midclavicular line. The carotids, subclavians and brachials are usually seen to throb. The pulse is typically collapsing and the pistol shot and diastolic murmur are heard over the compressed femoral artery. Digital pulsation and the capillary pulse are present. A rough systolic murmur that is transmitted to the neck vessels accompanied by a systolic thrill without an anacrotic wave or plateau pulse may be present as evidence of an aortitis. A late diastolic rumble, the Austin-Flint rumble, is not infrequently heard at the apex, due to the functional narrowing of the mitral orifice. The Austin-Flint murmur may occasionally be accompanied by a diastolic thrill and can be differentiated from a true organic narrowing, a mitral stenosis, with difficulty, by the presence of the exaggerated peripheral phenomena and evidences of syphilis and the absence of the accentuated pulmonary second sound, the modified pulse, auricular fibrillation, and other evidences of an old rheumatic fever infection.

Syphilitic heart lesions when not causing heart failure symptoms, do not require cardiac drugs, and are furthermore prone to progress unfavorably under intravenous arsphenamine treatment. We have had a number of apparently suitable and prepared cases that have been made worse by even small doses of arsenicals carefully administered. We, therefore, advise only mercury inunctions or injections and potassium iodide in this type of case. The restrictions against the overstepping of the limits of physical tolerance, as indicated by breathlessness, should be most rigidly drawn up and the dangers of strain impressed upon the patient. The appearance of the signs of heart failure in a patient with syphilitic heart disease is an ill

omen. The restoration of the patient to a level of exercise tolerance compatible with comfort is often a difficult task and requires months of rest in bed to insure any permanency of the relief. Once the syphilitic cardiac involvement has become sufficient to produce symptoms of cardiac failure, a fairly rapid progress downward is to be expected in spite of careful treatment.

In syphilitic heart disease, auricular fibrillation rarely occurs which is in direct contrast to rheumatic heart disease, which almost always eventually results in auricular fibrillation. Nevertheless, when there is cardiac failure in a case with a syphilitic or any other type of lesion and a regular rhythm, digitalization will produce favorable results as Christian and others have shown.

OTHER INFECTIOUS DISEASES

Other infectious diseases may at times produce heart disease which is usually of an acute malignant and fatal type of endocarditis or pericarditis. The common invading organisms are pneumococci, streptococci and gonococci, *B. influenzae* and tubercle bacilli. These infections produce heart lesions accompanied by a septic fever, anemia, wasting and often embolism to the skin producing petechiae, to the spleen causing enlargement, to the kidneys with a resulting hematuria, etc. The treatment in most instances is expectant, since pneumococcus type I is the only organism for which there is an antiserum. Arsenicals and powerful germicidal dyes used intravenously offer some hope, but not very much at present. Pericardial inflammations with effusion sufficiently great to produce cardiac embarrassment by tampon action should be drained, washed with germicidal dyes and air or oxygen injected. This often relieves the pain and promotes healing just as a pneumothorax often does in a case of pleurisy. The few patients that recover from these acute cardiac infections have either organic valve lesions or pericardial adhesions and may eventually suffer from cardiac failure.

A goodly number of patients, some with and some without organic valvular lesions are found who date all of their cardiac symptoms from an attack of influenza. This, of course, merely suggests that the myocardium underwent changes similar to or perhaps slightly more extensive than one might expect with any acute infection, enough, however, to precipitate cardiac weakness.

NON-INFECTIOUS CAUSES OF HEART DISEASE

Rheumatic fever and syphilis produce very definite valve lesions which embarrass the cardiac function, but as pointed out, the lesions which are the really serious ones and upon which the prognosis really depends

are those that are invariably present in the myocardium in these infections.

The group of cases that we are now to discuss present no significant valvular defects but definite myocardial weakness and damage. The term *chronic myocarditis* is applied to this type of heart disease, and should be reserved and not used in cases of organic valve lesions since it is generally recognized that these invariably have important myocardial changes.

Chronic myocarditis is most common in individuals past middle life and the associated degenerative conditions are considered to be the causes. Arteriosclerosis which may or may not be evident in the peripheral vessels, associated with or not associated with high blood pressure or kidney lesions produces myocardial changes. In some cases there may be a degenerative arteriosclerotic valvulitis with calcareous deposits which may produce harsh and even musical mitral and aortic murmurs. The blowing mitral systolic murmur is, however, of little significance. The diagnosis is somewhat indirect and inferential for there are few direct signs. In the presence of any one of the associated degenerative conditions arteriosclerosis, hypertension or chronic nephritis the diagnosis is justifiable, even though the signs of impaired function are not evident. Toxic goitre not infrequently produces severe degenerative changes in the heart muscle, thus producing a chronic myocarditis.

Enlargement of the heart in the absence of organic valve lesions, whether due to hypertrophy or dilation or both, is a reliable sign of chronic myocarditis. Cardiac hypertrophy from the clinical viewpoint never seems to be definitely beneficial and usually appears to be distinctly detrimental. The phenomenon is not manifestly compensatory for in many instances the stimulus of excessive work is not apparent. Then, too, it is common knowledge that the larger the heart the more severe and extensive the damage.

Certain important disturbances of the mechanism of the heart beat, such as alternation, heart block, auricular flutter and auricular fibrillation when persistent are evidence enough for the diagnosis of chronic myocarditis. These disturbances frequently develop in hearts damaged by the degenerative disease processes. In young adults the rhythm disturbances are in rare instances due to toxic goitre myocarditis, but more commonly the result of rheumatic mitral stenosis and myocarditis.

Alternation is the presence of a distinct weakness of every other pulse beat. The time intervals between the beats are all of equal length; that is, there is no disturbance of rhythm, especially no coupling of beats, such as one gets in bigeminy when every other beat is a premature contraction (extrasystole) fol-

lowed by a compensatory pause. Alternation is often missed unless especially looked for during the taking of the blood pressure, when it is noted that only half the pulse beats come through at the first systolic blood pressure level, while at a level 10 to 40 mm. lower all of the pulse beats come through to the wrist. Alternation is a grave prognostic sign of a failing myocardium.

Heart block is the aborting of the impulse that initiates contraction at any point in the specialized conduction system of the heart, the sino-auricular node, the auriculo-ventricular node, bundle or bundle branches. Block results in true completely "dropped beats" except where there is only prolonged a. v. conduction time or bundle branch block. The latter two exceptions require instruments of precision such as the electrocardiograph for their detection, the others, however, may be quite accurately diagnosed by clinical means. The rhythms are usually regular and slow and on exercise are not changed at all, if due to complete block or jump up by multiples of the rate if due to partial block. There is a disappearance of the disturbance when the heart rate is increased to 120 and as the rate drops after exercise there will be noted by an examiner with a stethoscope over the apex and his fingers on the carotid or radial artery a completely dropped out beat when the rate gets low enough. This absence of any sound at the apex differentiates the disturbance from a premature contraction which would give forth a premature sound at the apex and the pulse wave may or may not be transmitted to the carotid or radial, just preceding the pause. Atropine in many instances relieves the block. Heart blocks are evidences of damage to the special conduction tissues, and damage to the latter can practically never occur in patients without concomitant damage to the heart muscle.

Auricular flutter is a rapid, usually regular rhythm, due, as Lewis has shown, to stimulation of the auricle by a single and continuous wave, circulating usually around the mouths of the cavæ at a rate of 220 to 350 per minute. The auricular action is rapid and weak and usually only every other impulse is conducted to the ventricle with the result that the ventricular rate is only half that of the auricle. The auriculo-ventricular bundle is usually very easily influenced by vagus stimulation to block off more auricular impulses and, consequently, vagus pressure produces temporarily a very high grade block with a slow irregular ventricular rate. Vagus pressure usually has very little, if any, effect on fibrillation. Auricular flutter can usually be changed to fibrillation by digitalization and then sometimes the fibrillation will give way to normal rhythm. Quinidin

may change flutter into normal rhythm directly, but we feel that digitalization is safer.

Auricular fibrillation has been shown by Lewis to be intimately related to flutter, differing in that instead of the single circus wave, there are circulating sinuous waves propagated and revolving perpetually following varying re-entrant paths of least resistance, generating impulses irregularly at a rate of 450 to 600 per minute. The auricular activity consists in fibrillary twitchings, with no contractions and consequently dilation and engorgement. The auriculo-ventricular conduction bundle is showered with a great number of haphazard impulses of varying intensity. The more intense irregular impulses are conducted to the ventricle and the irregular ventricular action results. Many of the ventricular contractions are too weak to open the aortic valves, and consequently do not reach the radial, thus producing the so-called pulsus deficit.

Auricular fibrillation is the most important irregularity to differentiate for it is the source of much cardiac embarrassment if left uncontrolled and usually responds so spectacularly to digitalis. The differentiation is quite simple and can be carried out by increasing the heart rate by exercise or amyl nitrite. Any irregularity which persists when the heart rate rises to 140 per minute is auricular fibrillation; that is, while speeding up the heart exaggerates auricular fibrillation it clears up all other irregularity.

Auricular fibrillation is the result of myocardial damage and consequently indicates heart disease.

TREATMENT

Quinidin, which establishes a normal mechanism in many cases of irregularity, is gradually falling into disrepute. Following the methods of Frey who has done the most work on this subject, we have used a preliminary test dose of 2 grains (.1 G) to guard against idiosyncrasy to the drug. With no evidence of hypersusceptibility the drug was administered in 3 grain doses, gradually increasing to 7.5 grains (.4G) doses three times daily, the period of treatment totaling six to eight days. Occasionally larger doses were used and occasionally the drug was used over a longer period. Our results correspond to those of the many other observers in that in 40 to 50 per cent of the cases we were able to re-establish the normal mechanism. Our post-operative auricular fibrillation cases responded most uniformly and especially well when the etiology was toxic goitre or arteriosclerotic heart disease. Recent cases responded most readily and most permanently. Cases of long standing were more refractive to treatment and more treacherous because of the danger of thrombus formation in the dilated non-contracting fibrillating auricles

during the long period of stasis. Bits of the thrombus may break off with the re-establishment of auricular contractions and result in serious embolism. If there are any signs of cardiac failure, the patients should be thoroughly digitalized and not cinchonized. Even when quinidin therapy is successful, the re-established normal mechanism is often of only short duration. Quinidin cannot be given continuously because it produces myocardial weakness. In spite of the fact that normal mechanism is the most conservative, it is a question whether quinidin is advisable in these cases in preference to digitalis, for in most cases the establishment of normal mechanism in itself does not restore or improve the cardiac function.

Digitalis produces striking and reliable effects in auricular fibrillation and flutter. The type of digitalis preparation used, the method of administration, the dosage, and the criteria which determine the further management of these cases, warrant some discussion. It is of primary importance to use a fresh, active digitalis preparation which has been preferably standardized or assayed by the Cat Method. The Cat Unit being the weight of dry drug in milligrams, which is required to kill one kilogram of cat when the solution is slowly and continuously injected intravenously. High grade specimens of digitalis when not assayed by the Cat Method may be regarded according to Eggleston as having an average activity of 100 mg. to the Cat Unit, but not more than 75 per cent of the calculated total amount should be given in the first three doses. Likewise, when the patient's weight is not obtainable, due to his poor general condition or generalized edema, estimations of the true body weight are to be made as accurately as possible and not more than 75 per cent of the calculated total amount should be given in the first three doses. Adequate dosage, sufficient to produce prompt digitalization, is the important factor in treatment.

The average total amount to be administered by mouth to man is 0.15 Cat Unit per pound of body weight. The calculation of the average total amount of the drug is then made according to the formula for the type of drug used.

Grams of powdered leaf in total amount =
Mg. to Cat Unit x 0.15 x Weight in Pounds

1000
Cubic Centimeters of tincture in total amount =
Mg. to Cat Unit x 0.15 x Weight in Pounds

100
Cubic Centimeters of infusion in total amount =
Mg. to Cat Unit x Weight in Pounds

100

With a standardized preparation, the average total amount for a man of 150 pounds is

2.25 grams (34 grains) of the powdered leaf, 22.5 c.c. (4.5 fl. drams) of the tincture or 150 c.c. (5 ounces) of the infusion.

Pardee gives a similar method for estimating the amount of the tincture, which is the most widely used and most generally satisfactory preparation. He advises calculating on the use of 2 minims of standardized tincture per pound of body weight. For the man of 150 pounds this would allow 300 minims or 20 c.c. (4 fl. drams) of the tincture.

The method of administration of the total calculated amount is the next important point. Robinson reported the use of the drug in a single massive dose with demonstrable clinical results, as early as three hours after the administration and always within 18 to 24 hours. For experimental purposes the single massive dose is advisable, but it is not entirely free from dangers. Eggleston's methods are safer and very effective. When the patient has received no digitalis within the preceding ten days, in urgent cases $1/3$ to $1/2$ of the total calculated amount is given in the first dose. After six hours $1/5$ to $1/4$ of the total amount, after the second six hours $1/8$ to $1/6$ of the total amount and every six hours thereafter $1/10$ the until effect. If the patient has received digitalization. In non-urgent cases $1/4$ of the calculated total amount at each of the first two doses six hours apart and thereafter $1/10$ to $1/8$ of the calculated total every six hours until effect. If the patient has received digitalis within ten days and there are no evidences of effect, the total amount should be reduced to 75 per cent of the total calculated amount. If there are evidences of partial digitalization it is safest to use not more than 50 per cent of the total calculated.

The signs of digitalization are similar to those of slight digitalis poisoning. In auricular fibrillation, the auricular activity is not affected, but through action on the vagus, the His bundle conduction is greatly reduced, and only the stronger impulses at less frequent intervals are conducted. The ventricular activity is slower, more regular and more effective, so that with each ventricular contraction the aortic valve is opened and the pulse comes through to the peripheral arteries. The pulse deficit disappears, that is, the apex rate and the radial rate become the same, which is one of the results sought in digitalization. The drug is continued further until the apex rate is about 70 or slightly less, at which rate it should be maintained continuously. Nausea and vomiting after digitalization has been under way for some days; a fall of the heart rate to 60 per minute or lower; and the appearance of frequent extrasystoles or a coupling due to bigeminy are signs of adequate digitalization and

indicate a temporary discontinuation of the drug.

Digitalis therapy must be kept up in all cases of fibrillation. After digitalization, a patient will lose the digitalis equivalent of 20 minims, 20 to 30 drops, of the standard tincture per day. Consequently, to keep a patient digitalized with the heart rate at 70, he must receive this amount of drug daily. The effects of the calculated total amount are dissipated within a week to ten days, and therefore the small doses must be begun soon after digitalization. Thirty drops each morning or ten drops of the tincture t. i. d. are continued. After a week or so, the patient may again experience nausea, the drug is again temporarily withheld, and the dosage dropped to twenty drops of the tincture per day. The heart rate at the apex must be frequently counted as an index of effective therapy, which should keep it down to about 70 per minute.

Along with the specific therapy, the general measures are most important, as George Dock and others have long maintained. Rest in bed in Fowler's position, with morphine in full doses to promote sleep and complete relaxation are necessary adjuncts in the treatment of heart disease. A limitation of the fluid intake to 1000 c.c. (5 glasses) is of value especially in edematous cases, together with a low protein salt poor diet; all of these requirements are met by the Karell diet of 800 c.c. (4 glasses) of milk only per day. An increase in the fluid output also aids considerable in cases of heart failure with edema. This can be attempted by the Hay concentrated cathartic salts method in which 5 to 15 grams ($1/2$ to 1 ounce) of Glauber's or Epsom salts, in not more than a half glass of water, are administered three times daily for five to seven days. This treatment, however, is too drastic, and the dissipation of cardiac energy and reserve that is required in the maneuvers of getting on and off the bed pan or toilet defeats the end hoped for in the extraction of the reduction of the plethora by the extraction of fluid. Diuresis by theocin .2 to .5 gm. (2 to 7 grains) for three doses at three hour intervals in edematous cardiac cases that have had digitalis has been proven to be effective by Christian. Vemesection with the removal of 500 c.c. of blood frequently benefits a failing heart and often changes a picture of despair to one of hope. Massage, passive movements, resistant movements, and graduated exercises are rational methods of preparing a convalescent cardiac for getting up and about and eventually back to work.

In heart failure without disturbance in the rhythm digitalization should be carried out in the same way and the results while not so spectacular are nevertheless usually quite satisfactory as pointed out by Christian and others.

Here again the drug must be active and the dosage sufficient.

In partial heart block, especially in the sclerotic high tension case, digitalis by its action on the vagus and His bundle, increasing the block, may precipitate Adams-Stokes attacks. The patient might die in one of the attacks, or on the other hand, the slow rate of a damaged heart may embarrass the circulation to the point of heart failure because of an inadequate minute volume output. A clear conception of the disturbed mechanism as well as of the pharmacologic action of drugs allows one to use digitalis for its diuretic effect and whatever effect it may have on the heart muscle, even in the presence of heart block. In this connection, the use of atropin in 1/50 grain doses once per day and in any emergency makes safe the administration of digitalis to the point of getting beneficial effects.

Digitalis cannot be indiscriminately given in one and all types of heart disease. Recent careful studies by McCullough based on electrocardiographic as well as clinical and pathological observations show that digitalis is contraindicated in diphtheritic heart disease with its widespread acute myocarditis and conduction disturbances. Our animal work also suggests a possible contraindication to digitalization in cases with very high ventricular rates of 200 or more per minute for digitalized dogs' hearts when stimulated at such rates not infrequently went into ventricular fibrillation which practically always spells exitus. However, these two probable contraindications are greatly outweighed by the many indications for digitalis, extreme conditions which are so often promptly and conspicuously benefitted.

A FURTHER STUDY OF THE PHLORIDZIN TEST IN THE EARLY DIAGNOSIS OF PREGNANCY

L. W. HAYNES, M. D.
DETROIT, MICH.

In an earlier article on this subject the writer mentioned the importance of finding a trustworthy method of early diagnosis of pregnancy from a medico-legal standpoint; also the importance attached to such an early diagnosis from the patient's viewpoint; and I wish at this time to lay more stress upon it from the satisfaction it gives the obstetrician. We can all recall the many instances in our practice, when after completing the usual examination for pregnancy, had to ask our patients to return in two weeks or three weeks before we can tell them, with any degree of accuracy, whether or not they are pregnant. Therefore it is with a great deal of satisfaction that during the past year I have been able to say to the

woman with a suspected pregnancy that we have a new test which helps us to determine at an earlier period, and with considerable accuracy, the early pregnant state. I find that both the clinic and private patients readily agree to whatever time and inconvenience is attached to the carrying out of the details of such an examination. Practically all of our patients are in an unsettled frame of mind, and are anxious to know their exact condition as early as possible, and I have not found one who has objected. Several I have had return for a check on the results, and they also have readily agreed.

The technique of the Phloridzin test is no doubt familiar to all now, as the literature for the past year has contained a number of articles on the subject and the earlier ones, at least, described fully the details of the test. Kamnitzer and Joseph, working at the Municipal Hospital, Berlin, were the first to formulate definite rules. They have continued to lead in the work and report a much larger number of cases than any one in this country. It is their technique we have followed, with the exception of a few minor details. With further experience we have been able to eliminate some of the objectionable features without interfering with the results.

In the first twenty cases reported, and published in the May number of the Michigan State Medical Journal, we had our patients remain for the full one and one-half hours—obtaining the control specimen and three thirty-minute specimens. This we find is not necessary for many of the cases. If the control test is negative, and the first specimen obtained, thirty minutes after the injection is a definite positive reaction there is nothing further to be gained by obtaining more samples as far as diagnosis of pregnancy is concerned. If, however, as is sometimes the case, the first thirty-minute sample is negative, the second thirty-minute sample must be examined and the third one may be necessary and should always be secured and tested if there is any doubt of the reaction of the first two. From our results we can conclude, however, that the great majority of the cases will give a positive reaction with the first thirty-minute specimen after the injection and that therefore the majority of cases of early pregnancy will give a constant result in thirty minutes, thus eliminating one objection which has been raised—that of the time necessary to complete the examination.

With further work our knowledge of the limitations of the test has naturally advanced. In our first article we noted the fact that there was a great range of positive reactions; that some specimens of urine became dark almost immediately when the Nylander solution was added; that some were positive only with boil-

ing and some had to stand after boiling, and thought at that time that as more work was done and more experience gained we might be able to differentiate between the pregnancies, inflammatory conditions and tumors, by the character of the positive reaction. We now believe, however, that the difference in the positive reactions obtained in different individuals means that the reactions undergo individual variation to the Phloridzin and has no further significance. It has been shown that we not only may get positive reactions in some cases of tumors and pelvic inflammatory conditions, but that the test was distinctly positive in some cases of pneumonia with high fever, and pulmonary tuberculosis with high fever. Thus the phloridzin test is narrowed down to the condition for which it was originally intended—that of assisting in the diagnosis of early pregnancy.

A sufficient amount of work has been done at this writing to produce several theories as to why we obtain a positive reaction in the early pregnancy and a doubtful reaction in disturbed pregnancies, or incomplete abortions. It is known that there is an increased permeability of the renal epithelium for blood sugar during pregnancy and because of this, renal glycosuria can be produced with smaller doses of phloridzin than in non-pregnant women. A minimum irritation dose of two milligrams may give a positive reaction by the Nylander's reagent in a pregnancy in one-half to one hour—where, in the non-pregnant, a larger dose would be necessary. It is generally considered that an intact placental circulation is necessary to produce the reaction. However, there are a few cases reported where positive results were obtained in the presence of considerable bleeding. Also, there are two cases reported of criminal abortions with retained placenta, giving positive reactions.

Lewin, as a result of his work, concludes that in abortion it is not possible to decide by phloridzin whether the abortion is complete or incomplete. But it is possible to decide whether a hemorrhage with a closed os is due to an accomplished or an imminent abortion.

Since the first article appeared along this line, there has been much written and many discussions about the inaccuracy of the control test reaction. I have always contended, and still do, that this inaccuracy is due entirely to some difficulty in the technique. Several weeks ago, while talking with a confrere along this line, he stated that although he had done a great deal of experimental work on ingestion glycosuria, he had not followed up the use of the phloridzin test because of his results with the first five cases. To test it out, he gave five male medical students the instructions and told them to use it on themselves.

They brought back a report of having obtained five positive reactions and the doctor decided the test was not reliable and had not tried it further. Up to that date, all my controls had been on healthy females and had been 100 per cent correct. I then tried it on some males and, to my surprise, found one positive reaction. Upon investigation, this particular Nylander's solution was found to be old and the specimen of urine, when tested with a fresh Nylander's solution, gave a negative reaction. We now make it a rule never to use a Nylander's solution over ten days old.

I am satisfied that the success of the test depends upon accuracy of technique; first, the thorough preparation of patient; second, accuracy of dosage of injection; and third, the use of fresh reagents. Regarding the first point, that of the thorough preparation of the patient, all agree that certain drugs must be avoided before the test. It will not be accurate on a patient who has taken antipyrine, salicylates, camphor, saccharin, chloral hydrate, chloroform and adrenal preparations within a few hours. Some think it necessary to have patients report early in the day so the test can be made on an empty stomach. With our first series we attempted to carry this out, but later found our results to be the same at any time of day and have therefore more recently been disregarding a full stomach. We have been able to prove in our work to our own satisfaction, at least, that accuracy of dosage is of greatest importance. The drug is supplied in ampoules which contain varying amounts from one to one and a half cubic centimeters. The basis of our test is to give a minimum irritation dose, which has been determined to be two milligrams, and as each cubic centimeter contains just two milligrams, the result will not be accurate or liable if the entire contents of the ampoule is given. I have already mentioned the importance of using a fresh reagent in making the urine test. The chemists with whom we advised did not agree as to the length of time Nylander's solution could be used. After some experimenting with different solutions we feel that one can depend on the reagent if it has not been prepared over ten days.

I have reviewed the literature regarding findings on controls and note that ten authors report 318 cases, and of these 94 per cent have given a negative reaction. Three of the authors, having cases ranging in number from 35 to 70 each, had 100 per cent negative reactions. Men having the smallest number to report, had the largest number of failures, and the average for the men having the most experience with the test was 97 per cent negative, or only 3 per cent failure. We have, with the five controls mentioned in the first article, 21 controls, and all gave a negative reaction, ex-

cepting the one above noted, which was readily negative with the use of a fresh reagent.

In addition to the 318 control cases mentioned, I have reviewed the results of 624 cases of suspected pregnancies coming within the three months period. Out of the 624 cases, 547, which were later proven to be pregnancies, gave a positive reaction. In other words, out of this comparatively large number the test was inaccurate in 12 per cent of the cases. I have attempted to be very liberal in these calculations, in that I have included the results of one man's work, (Koster), who said, out of 100 cases, 30 per cent were misleading. Some of this number undoubtedly should not be classed as failures.

As the number has become too large to give case reports, I will give only a summary of the 50 cases which we wish to report and which is exclusive of the 21 controls already mentioned. The ages of the patients ranged from 15 to 48 years, 20 were clinic and 30 were private cases. The laboratory work of the clinic patients was done by the hospital technician and the private cases was done by my office technician, with the exception of three cases, which will be referred to again. A number of the samples were run by both technicians for the purpose of checking the reagents. They were all within the three-month pregnant period. A light amber coloration appearing in the second or third samples after boiling and standing are considered negative reactions. The heavy black precipitate appearing at once with the first sample after injection, or in the second sample with boiling, is considered positive. I have never seen the black precipitate appear as late as the third sample. The further work has also more definitely proven the statement made in our first article that the earlier the pregnancy, the more rapid the positive reaction.

In our series of 50 cases we had 36 positive and 14 negative reactions. In all of the 50 we have since been able to prove or disprove the accuracy of the result of the test. I have found 44 of the reactions were correct, and 6 incorrect, making our percentage slightly over 13 per cent incorrect, as compared with 12 per cent of the larger number of cases reviewed in the literature.

Besides the 50 cases of early pregnancy reported in this series, we have tried the phloridzin test on 12 pelvic inflammatory and fibroid cases. With these there was no regularity of results. We have had three miscarriages—two giving negative reactions, and in both of which cases the membranes passed within a few hours. In the one positive reaction case, although the patient was flowing, the pregnancy was not passed for several days. Therefore, we can say that our results with these few miscarriage cases agree with the findings of other men which were noted above. Since

starting this work we have not had a case of extrauterine pregnancy. One in which a tentative diagnosis of extrauterine pregnancy was made, and in which we found a positive phloridzin test, was a mistaken diagnosis, and is recorded as one of the failures.

I will not attempt in this paper to review or say anything further regarding the 44 cases in which the reaction was correct. It will be of interest, however, to hastily review the 6 cases in which the reaction was not correct.

CASE REPORTS

The first was a Miss O., age 27, admits the possibility of pregnancy. She had missed one period and was increasing in size; breasts were enlarging and bimanual examination was positive for early pregnancy. The report of the phloridzin test was positive, but this was one of the specimens not run by the two technicians. The examination was made by an interne, who was not familiar with the technique, and this may be a source of error. The patient was later found not to be pregnant.

Case no. 2. A Mrs. W., was a young married woman, with one child. One year previous had right tube and ovary removed, and had had a variety of pelvic symptoms since. She was four weeks over her period. Bimanual examination was negative for pregnancy. The Phloridzin test was negative. This examination was made the fifteenth of May. The first of June she aborted. The usual technique was carried out excepting that she had come in from the country without an appointment, and without the usual instructions as to preparation for the test.

Case no. 3. Mrs. B., was almost a borderline reaction, in that we obtained an amber color with sample number one and two; after boiling and cooling it showed a light black precipitate. This we called a positive, and it was later determined that she was not pregnant.

Case No. 4. Mrs. H., had slight bloody discharge each day since regular period. Albumin was present in urine, cervix soft, and fundus forward. Phloridzin test gave a fast heavy black precipitate. Since it has been determined she is not pregnant.

Case No. 5. Mrs. M., probable diagnosis of pregnancy was made from symptoms and pelvic examination, and later proven to be correct. Phloridzin test was negative with the Nylander solution about eight days old. This was checked with an absolutely fresh reagent and was positive but the case is classified among the six incorrect reactions because the series includes specimens reacting to the older Nylander.

Case No. 6. Mrs. H., a very thin, delicate individual, with a tubercular family history, one week over period. Test was positive. Later it was proven she was not pregnant. Although there was the possibility of tuberculosis in this case, it was not diagnosed and I have no record of her temperature having been taken when the test was made. This patient has moved away and a more definite history and diagnosis was impossible.

I am not attempting to prove anything by detailing the six cases, but it has been suggested to my mind in reviewing our incorrect results, that probably still more care in the technique, and further experience will reduce the percentage of inaccuracy. However, although a comparatively new study, it does

measure up well with our other laboratory tests as a diagnostic aid.

Certainly it is the most accurate and the easiest to perform of any laboratory aid in the diagnosis of early pregnancy which has been suggested so far. It has given the writer great satisfaction to have something more definite upon which to base a diagnosis than in the past, and we have added this test to our routine examination in determining the early pregnant state.

REFERENCES

1. Kamnitzer & Joseph: *Therapie der Gegenvart*, Dec., 1921. *Medizische Klinik*—1922.
2. Long & Hirst: *Ingestion Glycosuria an aid to Early Diagnosis of Pregnancy*. New York Medical Journal Record. November, 1923.
3. The use of Phloridzin in the Early Diagnosis of Pregnancy. Hellman. New York Medical Journal. November, 1923.
4. Gayler: *Journal of the Missouri State Medical Association*, July, 1923.
5. Dowig, Deutsch: *Med. Wehnschr.*, Leipsic, August 19, 1923. Experience with Maturin in Early Diagnosis of Pregnancy.
6. E. Schilling & M. Sobel *Klin. Wehnschr.* Berlin. April, 1922. The Diagnosis of Pregnancy by injection of Phloridzin.
7. Lucie Lewin Deutsch *Med. Wehnschr.* Leipsic, Jan. 28, 1923. The Early Diagnosis of Pregnancy by Maturin.
8. Paula Koster, Deutsch. *Med. Wehnschr.* Leipsic. February, 1923. Phloridzin as an aid in the Diagnosis of Pregnancy.
9. Stephan, Arck. f. *Gynak.* December, 1922. The Early Diagnosis of Pregnancy.

THE SURGICAL TREATMENT OF ANGINA PECTORIS*

J. WALTER VAUGHAN, M. D.
DETROIT, MICH.

Although the operation of resection of the cervical sympathetic ganglia has been advocated and attempted as a means of relief of many and various disease conditions, yet it was not until the year 1916 that an attempt was made to offer relief for that distressing clinical syndrome classified as angina pectoris by means of this procedure.

As early as 1899 Franck suggested left cervical sympathectomy as a rational means of relieving the pain associated with angina pectoris, yet it remained for Jonnesco to be the first to actually put this method into operation. His first report was made in 1920. Since then he has reported five other cases, to which Tuffeir, Coffey and Brown, V. Pleth, Bacon, Wenckebach, Halstead and Christopher, and Smith and McClure have added a total of nineteen cases.

Undoubtedly many other cases have been operated for the relief of this condition which, so far, have not been reported, but it is the author's desire to add one more because of the rather unusual surgical anomaly encountered during the operative procedure and the decided and complete relief furnished by what apparently was a

very incomplete removal of the cervical sympathetic ganglion.

Thus Jonnesco advocates the removal of the entire cervical sympathetic, including the first thoracic ganglion, upon whichever side is the site of the most marked pain, with a secondary removal of the opposite side if relief is not obtained. In contradistinction to this Wenckebach, while referring to the cases operated upon by Eppinger, stated that resection of the left depressor nerve, which accompanies the vagus in its sheath to a rather high level, is sufficient to bring about the desired relief.

As this case has been reported from the medical standpoint by Doctors C. G. and A. F. Jennings, the chief reason for the present report is to call attention to the surgical anomalies encountered.

The patient, Mr. E. E. M., age 41, unmarried, stated that his father died at 79 from apoplexy. His mother died at 56 from mitral stenosis. One brother succumbed because of tuberculosis, and one from an accident. One sister died from pernicious anemia and one from a puerperal accident. Two brothers and two sisters are living and well.

His personal history showed the usual diseases of childhood. Typhoid fever in early adult life and an unoperated attack of appendicitis at 25 years of age. In 1918 he had pneumonia, while previously, in 1917, he had bronchial asthma after being partially suffocated during a fire in a munitions factory. These attacks were brought on by excitement or over-eating and were relieved by adrenalin. He thought that they had been much improved after removal of his tonsils and some infected teeth, and drainage of infected accessory nasal sinuses.

In September, 1923, he was referred to the writer by Dr. Jennings because of an acute empyema of the gall bladder accompanied by marked jaundice. Laparotomy was performed and the gall bladder opened and drained, many gall stones removed—the gall bladder contents being stones and pus. Palpation of the ducts at this time was negative, but the head of the pancreas was much hardened and distended.

Six weeks later, after drainage had ceased, he again became markedly jaundiced, the same being accompanied by chills and fever. A secondary laparotomy was performed and the ducts thoroughly explored for a possible overlooked stone. None could be found, but the pancreas again showed evidences of an acute infection. Drainage of the gall bladder was re-established and the patient made a rather rapid recovery with the exception that a very large post-operative hernia developed at the site of the incision.

The history of the patient's anginal attacks dated from 1918. It was discovered at this time that he had an arterial hypertension and he complained of severe attacks of pain in the precordial region and upper abdomen. It was thought that in all probability these attacks were related to the presence of gall stones, but the persistence of the anginal attacks, together with their increased severity and frequency, rendered this solution untenable.

Again, previously, in May, 1922, the patient suffered a right sided hemiplegia with motor and sensory paralysis from which he recovered after several months, the true angina attacks beginning a few months thereafter. These attacks began rather mildly, but increased in severity and frequency. The pain was precordial and extended down the

*Read before the Surgical Section, M. S. M. S., Annual Meeting, Mt. Clemens, September, 1924.

left arm and through to the back. The minor attacks were relieved by the administration of amyl nitrite, but the severe ones could be controlled only by the administration of from $\frac{1}{2}$ to $\frac{3}{4}$ grain of morphia. Such attacks became more frequent and more severe until before operation they were of almost daily occurrence, and at times even much more frequent.

The patient's blood pressure ranged from 180 systolic and 110 diastolic to 220 systolic and 140 diastolic. The left ventricle was enlarged to percussion and to X-ray and the aortic arch was enlarged to X-ray. Laboratory tests of blood and spinal fluid were negative.

April 8th, 1924, under anesthetic of ethylene gas, resection of the left cervical sympathetic ganglia was performed. After the usual skin preparation, an incision seven inches in length was made along the posterior border of the sternocleidomastoid muscle. This muscle was reflected forward with the exception that the incision was carried slightly into the muscle substance at the superior end of the posterior margin so as to avoid injury to the exposed lesser occipital nerve. The great auricular nerve was laid bare for a distance of two inches, without other injury to that structure, while the spinal accessory nerve was exposed for a distance of one and one-half inches. The great vessels of the neck were brought into view by retracting the sternocleidomastoid muscle forward and the vagus nerve was demonstrated running in the sheath of the great vessels.

Coursing along the anterior surface of the longus capitis muscle a nerve was encountered whose position accorded with that of the cervical sympathetic. However, upon tracing upward and downward for a distance of five inches no ganglion or branching could be discovered. Nevertheless, when this nerve was injured by pinching with forceps the pulse rate immediately increased to a rate of 120 per minute. It was, therefore, thought that we must either have a sympathetic nerve, which did not possess the characteristic text-book description, or that the depressor nerve had been encountered after an extremely low vagus separation. Therefore a piece about three inches in length was excised from this nerve. The wound was closed by means of cat-gut sutures and interrupted silk-worm gut for the skin, no drainage being used. The total operative time was thirty minutes.

The above method of approach is that advocated by Jonnesco and the steps involved have been reported somewhat in detail because of the fact that it was the writer's belief that an approach along the anterior margin of the sternocleidomastoid muscle is possibly preferable to the method given above. An incision anterior to this muscle was advocated by Mayo at the time that cervical sympathectomy was being performed for purposes of relieving severe exophthalmos in toxic goitre—and it has been my experience that the few cases that came under my observation at that time did not complain of the post-operative discomfort that could be directly attributed to the method of approach along the posterior border of the sternocleidomastoid muscle.

For the first few days the patient complained of numbness in the shoulder and behind the ear, after which the pain in these areas became quite excruciating. This lasted over a period of about four weeks, after which sensation in these localities returned to normal. Evidently the stretching and exposure of the greater auricular and the accessory nerves was responsible for the discomfort during this period and the approach along the anterior border of the muscle would minimize the handling of these tissues.

Upon three occasions, during the first two post-operative weeks, the patient complained of short attacks having all the symptoms of angina except the pain. Since then there has been no recurrence of such phenomena.

Four weeks after cervical sympathectomy the large abdominal hernia was closed by operation. The anesthetic used was ethylene gas and oxygen, and the time involved forty minutes. No untoward effect was observed whatsoever, either symptomatically or from blood pressure or electrocardiographic readings.

Five months have now elapsed since the operation was performed and the patient is attending to his regular duties and even indulging in the rather arduous sport of motor boat racing without any recurrent trouble whatsoever.

That the nerve encountered in the case described above was in all probability an unusual anomaly of the cervical sympathetic was demonstrated by the rapid occurrence of the characteristic enophthalmos shortly after operation.

It is not the purpose of this report to enter into a discussion of the value of this operation as a curative factor in angina pectoris. Suffice it to state that it relieves the pain and frequently renders the patient capable of attending to ordinary duties during a stage of the disease in which he otherwise would be a hopeless cripple, and, therefore, it has a decided value in the control of the anginal attacks.

The chief points which I wish to emphasize through the above presentation are that an approach along the anterior border of the sternocleidomastoid is preferable to that along the posterior margin, and also that possibly as complete a resection of the cervical sympathetic ganglion as advocated by Jonnesco is not essential in all cases.

In the case cited above no definite ganglion was encountered and yet all afferent impulses from the pathological field were evidently severed by a simple resection of three inches of the nerve. If such proves to be the case, the formidability of the operation is greatly reduced.

REFERENCES

1. Frank: *Bul. de l'acad. de med.*, Paris.
2. Coffey & Brown: *Archives of International Medicine*, February, 1923, Vol. 31, P. 200.
3. Wenckebach: *Bulletin of Battle Creek Sanitarium*, March, 1924.
4. Bacon, J. H.: *Journ. A. M. A.* 1923, LXXGI, 2112.
5. Jonnesco, T.: *La Presse Medicale*, Paris, 1923, GGXI, 517.
6. Halstead & Christopher: *Journ. A. M. A.*, May 24, 1924.
7. Jonnesco, T.: *La Presse Medicale*, Paris, 1924, XXXII, 138.
8. Von Pleth: *Am. Journ. Surgery*, 1922, XXXVI, 300.
9. Tuffeir: *Bul. de l'acad. de med.*, Paris, 1924, LXXXVI, 70.
10. Smith & McClure: *Surg., Gyn. & Obs.*, August, 1924, P. 210-215.

EXPERIMENTAL STUDIES ON THE NATURE OF PLACENTAL EXTRACTS

CONSTANTINE L. A. ODEN, B. S., M. S., M. D.
MUSKEGON, MICHIGAN

This work was undertaken with the view of clearing up some of the disputed points and harmonizing the many apparently contradictory facts that have been brought out in connection with the so-called "placental theory" of eclampsia.

That eclampsia is essentially a toxæmia is now generally accepted by all observers, but whether the toxin or toxins concerned are specific products of foetal elements, or are merely the usual substances involved as a result of disturbed metabolism, is a question that divides the great theorists into two schools.

The former, or placental theory, so significantly pointed out by many clinical facts, has been supported by numerous very interesting experimental studies and was the prevailing view until the publication of the work of Lichtenstein (1909), a series of experiments in which he proved that the toxic effects of placental extract found by previous workers were of a mechanical nature, inasmuch as they could be produced equally as well by inorganic indifferent materials such as argilla, and that properly filtered extracts or emulsions could be injected with impunity. With this, called by Whitridge Williams "the most serious blow" to the placental theory, the general interest has been divided into the latter interpretation and eclampsia has been regarded as manifestation of some form of disturbed metabolism.

Notwithstanding the fact that numerous investigators have since discredited the general conclusion of Lichtenstein and placed the placental theory on a firmer basis than before, little attention has been paid to them as is evidenced by the statement of Williams in the latest edition of this textbook of obstetrics that "subsequent writers have failed to meet his (Lichtenstein's) criticism" (p. 682, '17). And it is in consideration of this situation, that of a downfallen theory struggling to regain its former supremacy, that this investigation, which involves a repetition of some of the later experiments, was undertaken.

The chief experimental contributions to the "placental theory" of eclampsia may be very briefly stated as follows:

(1) Veit (1904-1905) injected the expressed juice of placenta into the peritoneal cavities of rabbits and found that it produced albuminuria, hemoglobinemia, nephritis, and, in some cases death with symptoms simulating those of eclampsia. He also

found that the serum of such rabbits had acquired the power of dissolving the syncytial cells, i. e., it developed a "syncytiolysin." On the strength of this he conceived eclampsia to be due to an excess of syncytium carried into the maternal circulation (Veit's "deportation" theory) which cannot be neutralized by the available syncytiolysin in the mother's serum.

(2) Ascoli (1902) injected rabbits with guinea-pig placenta and thus produced a specific syncytiolysin. He then injected this immune rabbit serum suddenly into pregnant guinea pigs and thus caused death with symptoms signifying those of eclampsia. Injected subcutaneously the animals lived, but developed albuminuria. He conceived the "toxin" of eclampsia to be "syncytiolysin."

(3) Weichardt (1902) injected rabbits with human placenta and found that the rabbit serum developed a specific lysin. Such a serum plus human placenta injected without filtering, subcutaneously, into animals caused death with symptoms similar to those of eclampsia, together with necrosis of the liver, degeneration of the kidneys and multiple thrombosis. He conceived, with Veit, eclampsia to be due to unneutralized syncytiotoxin.

(4) Later Weichardt and Piltz (1906) demonstrated in placental extract the presence of two distinct poisons, one that accelerates the coagulation of blood and one that paralyzes the respiratory centre.

(5) After this Freund (1907) supported fully the conclusions of Weichardt and Piltz in work which he reported at the twelfth Gynaecological Congress in Dresden in 1907. Freund also found that the extracts of all glandular organs (spleen, pancreas, liver, kidney) possessed a poison (plasma gift) similar to that found in placenta. Extracts from non-glandular organs, such as the brain and muscles, gave negative results. He thus conceived the toxin to be essentially a gland product and regarded the placenta as a kind of gland. Freund furthermore found that the toxin of human placenta was neutralized by fresh human blood serum.

(6) In 1908 Lichtenstein repeated Weichardt's, Piltz's and Freund's work with results which culminated in the serious blow to the placental theory above mentioned. He could cause acute death with thrombosis if he used unfiltered placental extracts and injected intravenously, but he found intravenous injections ineffective if the extracts were filtered. He then passed the placental pulp through graded sieves (up to No. 6) and found it effective, but pulp passed through sieve No. 6 (a finer one) could be injected without impunity. He also injected suspensions of fine clay "argilla" prepared by same method and got parallel results. Thus he concluded that the death of the animals was caused by blocking of the capillaries and small vessels of the lungs, and in support of his conclusion demonstrated embolic masses of syncytium in the pulmonary arterioles and capillaries.

Freund also got negative results from filtered extracts, but believed the reason was that the placental toxin was inseparable by filtration from the protein particles, a view which is thoroughly disproved by Lichtenstein's sieve work, both with placenta and with argilla.

(7) Kraus, Lowenstein and Volk (1911) injected extracts of guinea pig lung intravenously into guinea pigs, with the production of acute death. If these extracts were filtered through a Berkfield filter or heated to 60° C. they could be injected intravenously without outward effects.

(8) Schickile (1911) expressed juice from the ovary, corpus luteum, and the uterus by means of a Buchner press under a pressure of 400-500 atmospheres. The expressed juice from these organs,

when injected intravenously, caused acute death of the animal. He further demonstrated both *in vitro* and *in vivo* that they caused a marked inhibition of coagulation of blood. The juice from other organs, however, namely, placenta, liver, kidney and muscle, caused a marked acceleration.

Extracts in normal salt solution of the same organs were without effect when injected intravenously.

(9) Following the work of Kraus, Lowenstein and Volk, Dold (1911) began to get results with centrifuged and filtered watery extracts which differed so markedly from those of previous workers that a detailed statement of his technique is justified. Fresh organs were cut up and ground in a mortar with sterile sea sand, to which was added drop by drop during the grinding, sterile normal saline solution up to 10-25-c.cm. The pulp was filtered through filtered paper or cloth and centrifuged. The supernatant fluid which was free from all gross particles was then injected intravenously into rabbits and guinea pigs. The organs used were normal and tuberculous lungs and spleen. He did not use the placenta. In later experiments he found the use of the mortar unnecessary; leaving the cut pieces of tissues in salt solution at room temperature for two hours being sufficient. This centrifuged saline extract, when injected intravenously in doses 2-4 c.c. into rabbits and guinea pigs caused acute death. This "organ gift" was found to be neutralized by any, but more effectively by homologous blood serum. It was also found to be destroyed by a few days standing at room temperature, by filtration through a Berfield filter, by heating $\frac{1}{2}$ to 2 hours at 60° C. and by being mixed with kaolin (the poison being physically absorbed). These together with the additional facts that the poison is much more potent for an homologous than for a heterogenous animal, led Dold to the conclusion that it is not of a simple chemical nature. The power of a serum to neutralize the "organ gift" was found to be destroyed by ordinary filtration. It was found also that animals could not be immunized against the poison. Dold emphasizes as one of the outstanding effects of the poison, the marked inhibition of blood coagulation.

Following Dold a number of experiments were made with a view of determining the nature and properties of this toxin or "organ gift," chief among which were those of Dold, Ogota (1912), Ascoli and Isar (1912), Isar and Patane (1912), Ishikawa (1913), Aronson (1913), Dold and Kodama (1913). The results obtained were divergent.

(10) In 1914 Young prepared emulsions and autolytic extracts of placenta by several methods, one of the most successful of which was the following: The fresh placenta, freely washed in saline, is cut into small pieces ($\frac{1}{2}$ in. sq.) which are spread out on sterile dishes and placed in the incubator for 12 to 16 hours. The dried pieces are then rubbed in a mortar into a fine powder which is made still finer by passing through fine meshed sieve. This powder is suspended in normal saline solution, forming an emulsion which can be injected into animals. He made all of his injections subcutaneously and into guinea pigs, using 0.4-0.5 gms. of the powder to 6-8 c.c. of saline solution for each injection. After three or four injections, twice daily, the animals usually died in convulsions with numerous and prolonged seizures. Necropsic examination revealed typical eclamptic liver necrosis and degeneration of the kidneys.

(11) Obata, in 1919, published a series of experiments on the effect of normal saline extracts of placenta when injected intravenously into Japanese dancing mice and rabbits. He took placental cotyledons, freed from decidua and as much as possible

from blood, then ground them in a mortar. This pulp is mixed with 0.85 per cent salt solution in proportion of 1-3 parts by weight. The mixture after being stirred, is allowed to stand at room temperature for $\frac{1}{2}$ hour, after which it is filtered and centrifuged. The supernatant fluid is injected intravenously. In the case of the mice the effects were immediate and are reported as violent dyspnoea, clonic convulsions, coma and finally death within 2-3 minutes. In the case of the rabbits, the effects, though in nature the same, were usually prolonged, death not supervening for hours or sometimes days. Obata claims also to have found at necropsy lesions in the liver and kidneys similar to those usually found in eclampsia. Lethal doses inhibited to the same extent coagulation of the blood, but small doses caused an acceleration of coagulation. He also found that any normal human serum possesses a practically uniform power of neutralizing the poisonous property of placental extract in proportion of 0.2-0.3 c.c. of serum to 1 c.c. of extract, but that this neutralizing power is considerably less in the serum of eclamptic women during the attack.

In the present investigation the experiments of Obata, of Young and of Lichtenstein were repeated. The technic of the respective authors being in each followed exactly. In addition, a parallel series of experiments were carried on with extracts from some organs used in the above-mentioned series obtained by means of the Buchner press. The method of using the Buchner press was as follows:

1. Placenta is washed thoroughly with running water for twenty minutes to get as much of the excess blood out as possible. During this process the placenta is held in the hand and squeezed, as this will aid much in the way of expressing the blood.

2. After the placenta has been thoroughly washed, the membranes are removed as well as possible and only the cotyledon is to be used, preferably that portion most deficient in large villi.

3. The portion to be used is weighed so as to be able to establish a somewhat definite quality. We use 200 grams of the placental pulp each time.

4. After weighing, the placental pulp is put through a meat grinder which will grind and macerate it into very fine particles. This is again washed until a pink fluid is exuded on pressure. The substance may now be placed into a cider press and the remainder of bloody fluid expressed.

5. The pulp, now thoroughly ground and washed, is put into a large mortar and ground with acid-washed sea sand. This grinding should take at least one-half hour.

6. This pulp is now placed in and wrapped in a linen napkin, then placed in the Buchner press. Pressure is applied and fluid which is expressed up to 200 atmospheric pounds is discarded as it contains a large amount of blood and sand. That portion of fluid which comes between 200 and 300 atmospheric pounds pressure is the extract and only about 8 c.c. are normally obtained. This is a clear pink, transparent fluid. The Buchner operation should take at least 45 minutes, ten minutes up to 200 and 35 minutes from 200 to 300.

7. The fluid is centrifuged so as to make sure there are no particles of sand in suspension. The supernatant fluid is used for injection.

I. OBATA'S EXPERIMENTS

As Japanese dancing mice were not obtainable, ordinary white mice and rabbits

were used. The technic which has already been described was followed to the letter. The placenta were all fresh (1 to 6 hours after delivery). The results are given in Table I. As is shown, they were all, without exception, negative. Obata's lethal dose for mice was 0.25-0.16 c.c. In our experiments as much as $\frac{1}{2}$ c.c. to mice, 3 c.c. to rabbits, and 6 c.c. to dogs were given intravenously without visible effects, excepting acceleration of respiration.

Extracts from some placentae made by the Buchner press, on the other hand, were all positive as shown in Table II. An average dose of 1 c.c. injected intravenously

into rabbits caused opisthotonos and death in 1 to 3 minutes. The pupils were at first markedly dilated and later contracted. The respiration was immediately paralyzed, but the heart kept on beating, even for some time after excision. Sometimes it showed auricular fibrillation; at other times two-to-one rhythm, and occasionally a normal heart. At necropsy, which was done in every case immediately, the portal blood was found clotted. the blood in the heart chambers, however, was usually fluid.

II. YOUNG'S EXPERIMENTS

Young made use of three methods of preparing his injected material: (1) the Buch-

TABLE I.

Experiment No.	Extract	Amount in c.c. Injected Intravenously	Animal	Result and No. Animal
1.	Saline extract of placenta by Obata's method	1 c.c.	Rabbit	1*
2.	Same as No. 1, but larger doses	2 c.c. 4 c.c.	Rabbit Dog	3* 1
3.	Fresh Placenta Saline	1 c.c. 6 c.c.	Rabbit Dog	3 1
4.	Fresh Placenta Saline	1 c.c. 2 c.c.	Rabbit Rabbit	2* 2
5.	Fresh Placenta Saline	1 c.c. $\frac{1}{2}$ c.c.	Rabbit Mouse	1* 3
6.	Fresh Placenta Saline	$\frac{1}{2}$ c.c. $\frac{1}{2}$ c.c.	Mouse Rabbit	2 2
7.	Fresh Placenta Saline	2 c.c.	Rabbit	3
8.	Fresh Placenta Saline, Puerperal Infection.	$\frac{1}{2}$ c.c. 2 c.c.	Mouse Rabbit	2 2
9.	Same as No. 8	1 c.c.	Rabbit	2*
10.	Fresh Placenta Saline, Eclamptic	1 c.c. $\frac{1}{2}$ c.c.	Rabbit Mouse	1 2
11.	Same as No. 10	2 c.c.	Rabbit	1*
12.	Fresh Placenta Saline, Eclamptic	1 c.c. $\frac{1}{2}$ c.c.	Rabbit Mouse	1 3
13.	Same as No. 12	3 c.c.	Rabbit	2

*Rabbits used again for further injection.

TABLE II.

Experiment No.	Extract	Amount in c.c. Injected Intravenously	Animal	Result and No. Animal
14.	Saline Extraction per Obata	2 c.c.	Rabbit	2
15.	Same as No. 14, but Buchner press used	1 c.c.	Rabbit	1
16.	Same as No. 14. Buchner press	$\frac{1}{2}$ c.c.	Rabbit	1
17.	Saline Extract—Placenta*	2 c.c.	Rabbit	1
18.	Same organ as in No. 17, but Buchner press used	$\frac{1}{2}$ c.c.	Rabbit	1*
19.	Same as No. 18	1 c.c.	Rabbit	1*
20.	Placenta—saline—per Obata	2 c.c.	Rabbit	1
21.	Same organ as in No. 20, but with Buchner press	1 c.c.	Rabbit	1
22.	Same as No. 20	$\frac{1}{2}$ c.c.	Rabbit	1
23.	Placenta—Buchner press	1 c.c.	Rabbit	1*
24.	Same as No. 23	3 c.c.	Rabbit	1*
25.	Placenta—Buchner press	$\frac{1}{2}$ c.c.	Rabbit	1
26.	Same as No. 25, but allowed to stand 48 hours at room temp.	$\frac{1}{2}$ c.c.	Rabbit	1
27.	Placenta—Buchner press	1 c.c.	Rabbit	1
28.	Same as No. 27	2 c.c.	Rabbit	1
29.	Placenta—Buchner press	1 c.c.	Rabbit	1
30.	Same as No. 29	$\frac{3}{4}$ c.c.	Rabbit	1
31.	Same as No. 29	$\frac{1}{2}$ c.c.	Rabbit	1

*Placenta over 48 hours old.

TABLE III.

Experi- ment No.	Extract	Amount in c.c. Injected Intravenously	Animal	Result and No. Animal
32.	Placenta—Saline suspension of pulp as Lichtenstein directs—Sieve 5	2 c.c.	Rabbit	3
33.	Same pulp as in No. 32. Passed through Sieve 6	2 c.c.	Rabbit	3*
34.	Same pulp as in No. 32, but filtered	1½ c.c.	Rabbit	2
35.	Extract Placenta saline suspension as per Lichtenstein Sieve 5	2 c.c.	Rabbit	1
36.	Same as in No. 6, except through Sieve 6	2 c.c.	Rabbit	2
37.	Same pulp as in No. 35—filtered	1 c.c.	Rabbit	1
38.	Same pulp as in No. 35, but put through Buchner press	1 c.c.	Rabbit	1
39.	Saline Placenta—through Sieve 6	2 c.c.	Rabbit	1**
40.	Same pulp as in No. 39—Sieve 5	2 c.c.	Rabbit	1
41.	Same pulp filtered	1 c.c.	Rabbit	1
42.	Same as in No. 39, but put through Buchner press	1 c.c.	Rabbit	1

*Used in No. 34.

**Same rabbit used again.

TABLE IV.

Experi- ment No.	Extract	Amount in c.c. Injected Subcutaneously	Animal	Result and No. Animal
43.	Placenta—Dried Placental powder in saline suspension. (Young).	*8 c.c.	Guinea Pig	1
44.	Same as No. 43	*8 c.c.	Guinea Pig	1
45.	Same as No. 43	*8 c.c.	Guinea Pig	1
Intravenously				
46.	Placenta powder suspended in saline passed through Sieve 6 (wet)	2 c.c.	Rabbit	2**
47.	Same as No. 46, but passed through Sieve 6 (dry)	2 c.c.	Rabbit	2**
48.	Same as No. 46, but passed through Sieve 4	2 c.c.	Rabbit	1
49.	Same as No. 46, but filtered	2 c.c.	Rabbit	1
50.	Same pulp passed through Buchner press	1 c.c.	Rabbit	1

*8 c.c. injected three different times.

**There seems to be some difference between the dry and wet. The dry through Sieve 6 will expand when saline is added, but when wet and then passed through Sieve 6 the results are negative.

TABLE V.

Experi- ment No.	Extract	Fluid Added	Time Incubated	Amount In- jected Intra- venously	Result No. Animal
51.	Placenta—Buchner press extract			1 c.c.	1
52.	Same as No. 51—Buchner press extract, 1 c.c.		2 hrs. 37 min.	1 c.c.	1
53.	Same as No. 51	Human Serum, 2 c.c.	2 hrs. 37 min.	3 c.c.	1
54.	Same as No. 51, 1 c.c.	Bloody fluid from Placenta, 2 c.c.	2 hrs. 37 min.	3 c.c.	1
55.	Same as No. 51	Saline, 2 c.c.	2 hrs. 37 min.	3 c.c.	1
56.	Same as No. 51, but with filtered human serum	Serum filtered 2 hrs.	2 hrs. 37 min.	3 c.c.	2
57.	Fresh Placenta—Buchner press			1 c.c.	1
58.	Same as No. 57, but incubated		2 hrs. 37 min.	1 c.c.	2
59.	Same as No. 57	Human serum, 2 c.c.	2 hrs. 37 min.	2 c.c.	2
60.	Same as No. 57	Bloody fluid from Placenta, 2 c.c.	2 hrs. 37 min.	3 c.c.	1
61.	Same as No. 57	Saline, 2 c.c.	2 hrs. 37 min.	3 c.c.	1
62.	Same as No. 57, but with filtered serum	Serum	2 hrs. 37 min.	3 c.c.	2

ner press, (2) saline extract of dried and powdered placenta and (3) by extracting in glycerine.

On account of shortness of time the third method was not tried. The results of methods (1) and (2) are given in Table IV. The guinea pigs all died after two or three in-

jections, usually in the course of 24 to 36 hours. Symptoms resembling those of convulsions were not noticed. The animals died a slow death, showing stupor but not coma. The liver and kidneys showed the ordinary diffuse granular degeneration so common in a great variety of diseases, but

no lesions in any manner resembling those of eclampsia. Intravenous injections into rabbits gave positive results, that is, opisthotonos and death with respiratory paralysis in one to three minutes, when the powder was passed through a coarse meshed sieve (No. 4), but negative results when it was passed through a fine sieve (No. 6). But if the saline suspensions were passed through sieve No. 6, the results would be negative, or when the suspensions were filtered. The deaths and necropsy findings were exactly the same as those in the animals killed by the Buchner press extract.

III. LICHTENSTEIN'S EXPERIMENTS

The results of the repetition of these experiments are given in Table III. Lichtenstein's results from intravenous injections of the saline extracts are confirmed in every respect—that is, suspensions of pulp passed through the coarse meshed sieves up to No. 6 gave positive results, while those passed through a finer sieve (No. 6), or filtered extract, gave negative results. The juice of the same placenta procured by the use of the Buchner press, however, filtered and centrifuged, invariably caused death in 1 to 3 minutes.

The clinical and anatomical phenomena associated with the death of these animals were the same whether the death was caused by Buchner press juice or by unfiltered saline extract. These have already been described and are the same as those noted by Weichardt, Freund and Lichtenstein. Lichtenstein believed that death was caused by mechanical blocking of the pulmonary arterioles and capillaries by gross particles of placental pulp. The fact that the supernatant fluid from the centrifuged Buchner juice is certainly free from all gross particles, causes death of an exactly similar type to that following injections of unfiltered saline extract, is a strong argument against this interpretation. In the animals killed by the unfiltered saline extract, emboli or syncytial masses were found in the lung capillaries, but there was little evidence of disturbance in the circulation in the surrounding tissues. In view of these facts, it seems practically certain that death is not the result of pulmonary embolism or thrombosis. Table V shows the effect of human serum added to and incubated with the poisonous extract.

The marked divergence of results obtained by different authors with the use of filtered saline extracts must, for the present, be left unexplained. With Weichardt, Freund, Schickele, Lichtenstein and others, as in these experiments, the results were negative, while those of Dold, Obata and

others, working by apparently the same methods, were positive. Owing to the fact that the blood serum neutralizes the poison, it was thought that the difference might be explained by the varying degrees of success in freeing the placental tissue from blood in making the extract. The fact that Dold obtained his organs after bleeding the animals to death, points to this view.

CONCLUSION

The present investigation has definitely proved that placental extract contains one or more toxic substances which, when injected intravenously into animals, causes quick death with convulsions, respiratory paralysis and rapid coagulation of the blood, phenomena closely resembling those found in eclampsia.

Repeated subcutaneous injections of large doses cause death in 12 to 36 hours with a train of rather indefinite symptoms. This series of experiments, however, has not been sufficiently developed to justify positive conclusions.

The exact nature of the toxin or toxins has not been determined. That it does not act mechanically, as claimed by Lichtenstein and recently currently accepted, has been demonstrated by positive results from injection of the perfectly clear supernatant fluid of centrifuged Buchner press juice. That it is not of a simple chemical nature is proved by the fact that it is neutralized by homologous serum. Furthermore, it has been shown that the neutralizing power of the serum is not of a "complement-binding" nature by the demonstration that filtration of the serum destroys its neutralizing power.

BIBLIOGRAPHY

- Ascoli—1902, Zur experimentellen Pathogenese Eklampsia, *Centrol f. Gyn.*, Vol. 49.
 Ascoli und Isar—1912, *Munch. Med. Wochenschr.*, No. 20, p. 1092.
 Aronson—1913, *Berline Klin. Wochenschr.*, Vol. 18, p. 682.
 Dold—1911, *Zeitschrift für Immunitätsforschung*, Vol. 10.
 Dold und Ogata—1912, *Zeits. f. Imm.*, Vol. 13, p. 667.
 Dold und Kodama—1913, *Zeits. f. Imm.*, Vol. 18, p. 682.
 Freund—1907, Zur Toxocologie der Placenta, XII Congress der Deutsche Gesellschaft f. Gyn.—Autoreferat, *Centrbl. f. Gyn.*, 26.
 Ishihawa—1913, *Zeits. f. Imm.*, Vol. 18, p. 163.
 Isar und Patane—1912, *Zeits. f. Imm.*, Vol. 14, p. 448.
 Kraus, Lowenstein und Volk—1911, *Deutsche, Med. Wochenschr.*, No. 9.
 Lichtenstein—1908, Zur Toxicologie der Placenta, *Archiv. für Gyn.*, Band LXXXVI, pp. 434-504. 1909, Im Kampfe gegen die Placentare Theorie der Eklampsie aetologie, *Zentralbl. f. Gyn.*, p. 1313.
 Obata—1919, *Jour. of Immunology*, May, No. 3, p. 111.
 Schickele—1911, *Munch. Med. Wochenschr.*, No. 3.
 Veit—1905, Über Deportation von Chorionzotten, *Zeits. f. Geb. u. Gyn.*, 44.
 1914, Verschleppung von Zotten und ihr Folgen, *Centrbl. f. gyn.*
 1905, IX Congress der Deutschen Gesellschaft für Gynaekologie.
 Weichardt—1902, Experimentelle Studien über Eklampsie, *Deutsche Med. Wochenschr.*, 35.
 1902, *Munch. Med. Wochenschr.*, 44.
 Weichardt und Piltz—1906, Experimentelle Studien über die Eklampsie, *Deutsche Med. Wochenschr.*, 46.
 Williams—1917, *Text book of Obstetrics*, New York, p. 682.
 Young—1914, *Jour. Obs. Gyn. of Brit. Empire*, No. 26, pp. 1-28.

PUBLIC HEALTH ACTIVITIES

Edited By

MICHIGAN DEPARTMENT OF HEALTH

FOURTH ANNUAL CONFERENCE OF HEALTH OFFICERS AND PUBLIC HEALTH NURSES

The fourth Annual Conference of health Officers and Public Health Nurses, held in Lansing under the auspices of the Michigan Public Health Association and the Michigan Department of Health, was attended by 227 health officers, public health nurses, sanitary engineers, and laboratory workers.

The first morning's session was devoted to registration and informal discussions. In groups of eight or ten, the guests were conducted through the offices and laboratories of the Michigan Department of Health, listening to brief explanations of the work of the eight bureaus.

Regular sessions began Wednesday afternoon with the presentation of four papers by members of the Department staff. Dr. Robert B. Harkness of the State Advisory Council of Health opened the formal meetings, and presided during the afternoon.

"The First Right of Childhood," was discussed by Dr. Lillian R. Smith, of the Bureau of Child Hygiene and Public Health Nursing. Dr. Smith emphasized the necessity of prenatal care of the mother as a first step in child hygiene. Touching briefly on the midwife problem, Dr. Smith urged better education of the midwives and more careful supervision of their work, until some substitute is worked out for the districts far from a doctor.

John M. Hepler of the Bureau of Engineering, talked on "Safeguarding the Playground of a Nation." The history of resort sanitation in Michigan was briefly outlined, preceding a discussion of the various types of resorts and their special problems. Mr. Hepler emphasized the difficulty of supervision with the present system of local health administration. Some local authority must be responsible for the sanitation of local resorts, including the supervision of water supplies, sewage and garbage disposal facilities, and the abatement of nuisances. In resort and tourist camp sanitation, eternal vigilance is the price of success.

"Hardwater: an Unnecessary Evil," was the subject of a paper by E. F. Eldridge of the Bureau of Laboratories. Mr. Eldridge stated that the waters of the Upper Peninsula and the upper part of the Lower Peninsula are softer than those in the southern, more densely populated sections of the state where the hardness may exceed 300 parts per million. Hardness

of Michigan's waters is due to calcium and magnesium in solution, loose combinations of these metals with carbonic acid. The remedy consists in the addition of lime which causes the precipitation of insoluble calcium carbonate with the liberation of carbon dioxide. Municipal softening plants operate on this principle. In a city the size of Lansing, the annual loss from hard water because of the necessarily excessive use of soap is computed as \$134,000. An additional \$144,000 is spent each year for soft water plumbing and the depreciation on private softening equipment.

Juliet O. Bell of the Bureau of Education discussed "Health Education of Children," illustrating her talk with posters and devices from one of the schools of Kalamazoo County. Miss Bell explained the county health education demonstration being carried on in Kalamazoo County, and advocated the adoption of the same type of measures in rural schools all over Michigan.

CONFERENCE SESSIONS ON THURSDAY, DECEMBER 11

The morning session on Thursday opened at 9:30 with Dr. C. A. Neafie, president of the Michigan Public Health Association, presiding.

The first paper on the program was given by Dr. Bernard B. Bernbaum, Herman Keifer Hospital, Detroit, "A Study of Smallpox Cases at Herman Keifer Hospital." Dr. Bernbaum reviewed the cases and clinical findings, and discussed the types of eruptions and complications. He also took up the distribution of cases according to age, sex and color, and according to their nativity. Dr. Bernbaum emphasized the fact that practically 100 per cent of the cases had never been vaccinated.

Puerperal septicemia in relation to public health was discussed by Dr. Florence L. McKay, director Division of Maternity, Infancy, and Child Hygiene, New York State Department of Health. Dr. McKay brought out the fact that 30 per cent of all puerperal deaths in New York State were due to puerperal sepsis. In communities with a population of 10,000 or more, this rate was higher than in rural districts. Each year showed a distinct seasonal variation in deaths from puerperal sepsis, the peak occurring in September and the smallest number in March. The number of deaths increased with the age of the mother, the

largest percentage being among the age group from 45 to 49 years.

Obstetric operations, that is, version, Caesarian section or the use of forceps had been performed in 25.7 per cent of the cases. This finding, Dr. McKay asserted, suggests that septicemia might be obviated by less operative interference during labor. Self induced or criminal abortion caused 20 per cent of the puerperal septicemia deaths. In one-third of all the septic maternal deaths, the physician reported that the patient had been neglected or had been given poor attention at some time previous to infection.

For reducing the puerperal septicemia death rate the following measures were recommended: supervision of midwives; improvement in the teaching of obstetrics in medical schools; education of the public to prenatal supervision and better care at delivery; education of the public concerning the dangers of abortion, and suppression of the criminal abortionist; adequate hospital facilities and more obstetrical free beds. In New York state sterile obstetrical packages are being distributed in rural districts by the State Health Department.

Dr. Harry L. Rockwood, Commissioner of Health, Cleveland, Ohio, presented "Theory Versus Practice in Public Health Work." Using smallpox control as an example, Dr. Rockwood distinguished between theory and practice in public health administration. "In the face of the fact that for 130 years an effectual means of preventing smallpox has been available, we as public health officials are repeatedly called upon to cope with this disease." The need of today is not for more theories, but a more practical application of those already known. "Let us make it clear that smallpox is prevented by vaccination when the entire community rolls up its sleeves, and that diphtheria deaths are needless when the baby of six months in every family will have received toxin-antitoxin." Dr. Rockwood closed by emphasizing the necessity for advertising not only the advantages of disease prevention, but also the cost.

A forum discussion of county public health nursing led by Miss Elizabeth Robinson, R. N., Lansing, ended the morning program.

The afternoon session was presided over by Dr. Guy L. Kiefer, president State Advisory Council of Health.

Dr. Kiefer first introduced Dr. S. J. Crumrine, director of public health relations, American Child Health Association, who talked on "The Relationship Between Voluntary and Official Health Agencies." Voluntary health agencies were described as

pathfinders blazing the trail in new and unexplored fields; they are or should be pinch hitters in emergencies. The activities of voluntary agencies should include education, demonstration, and transformation. Educational efforts in public health should first attract attention, then secure an interest, and ultimately create a desire. The National Health Council is a recently completed affiliation of ten voluntary health agencies, with four other organizations as conference or associate members. Its object is the co-ordination of the activities of the members of the Council and such other activities for the betterment of health as may be determined.

A new plan of evaluating municipal health service is sponsored by the Council, and promises for the first time to give the health officer a concrete method of measuring his work.

"When official and non-official groups can think and plan in terms of public service rather than personal interest, then we will discover that our mutual interests run along parallel lines, and that team work as expressed in sympathetic co-operation will carry us further in the right direction than a dog-in-the-manger policy that heretofore has characterized our efforts."

During the forum on communicable disease control, Dr. C. A. Neafie, health officer, Pontiac, gave an interesting resume of the scarlet fever control measures he has instituted. Scarlet fever cases in Pontiac are now released from quarantine on a basis of hemolytic streptococcus findings in throat cultures. This plan was begun in March, 1924, and in September, 1924, a new set of records was devised, and in addition to release cultures, swabs were taken when the case was reported and planted both on Loeffler's medium and blood agar plates. Hemolytic streptococci have been found in 100 per cent of the 72 cases where a series of two or more cultures have been taken from the throat, nasopharynx and nostrils. In 80.5 per cent of cases hemolytic streptococci were found on the first specimen examined. In 69 uncomplicated cases where two or more cultures negative for hemolytic streptococci were required for release, the average duration of quarantine was 37 days. In 25 cases complicated with diphtheria, the average duration of quarantine was 54.5 days. In 12 cases with otitis media of one or both ears or adenitis as complications, the quarantine period varied from 48 to 93 days.

Cultures should be obtained from the nasopharynx and the nostrils, besides the pharynx. Three successive negative hemolytic streptococcus cultures are now required for

the release of scarlet fever cases instead of two. The change to the larger number was occasioned by the occurrence of three secondary cases following primary ones which had been released after two negative cultures.

The Municipal Visiting Nursing Forum had as its chairman, Emilie G. Sargent, of Detroit, and as its first speaker Ellis J. Walker of Kalamazoo. Lizabel McKenzie of Flint, discussed her work with midwives and her classes of foreign mothers.

The only evening session of the Conference was held Thursday, with Dr. Leslie L. Lumsden of the United States Public Health Service as speaker. Dr. Lumsden had as his topic, "The Public Health Business" and he touched briefly on the opportunities and the duties of public health workers, with Michigan conditions particularly in mind. Dr. Lumsden urged the adoption of some form of full time county health service as the prerequisite of effective work.

SCARLET FEVER DISCUSSED AT FRIDAY SESSION

The Friday morning session was opened by Dr. C. C. Slemons of the State Advisory Council of Health as presiding officer.

Dr. Slemons first introduced Dr. Robert Lockhart, district health commissioner of Cuyahoga County, Ohio. Dr. Lockhart spoke on "Full Time Health Service in the General District of Cuyahoga County," describing the organization of the work under the Hughes-Griswold Law. Cuyahoga County is the county in which Cleveland is located, but the county unit does not include Cleveland. Dr. Lockhart discussed some of the difficulties met in the beginning of the work four years ago, one of which was the lack of any standard of comparison. The closing of the five-year period will give a valuable measuring rod for future work.

Dr. Leslie L. Lumsden of the United States Public Health Service was the second speaker on the program, discussing "Public Health in the Rural Community." Dr. Lumsden spoke at some length on the cost of a county unit. He said that \$10,000 was the minimum budget for a county of 20,000 people, making the per capita cost 50 cents. The danger of using the term "per capita cost" among people who did not understand it was emphasized. This budget would provide for a full time health officer, a sanitary officer, a public health nurse and a part time clerk.

"A Discussion of Some Aspects of Scarlet Fever" was presented by Benjamin White, Ph. D., Director, Division of Biologic Laboratories, Massachusetts Department of

Health. Dr. White urged caution in the adopting of the Dick test, stating that the biological background has not yet been conclusively proved. The etiology of scarlet fever, testing for susceptibility, and methods of immunizing are still in the experimental stage. While there is promise of a new era in scarlet fever control in the work now being done, the methods are as yet too experimental for adoption and routine use by health officers and public health nurses.

The afternoon session was called to order by Dr. Harkness of the Advisory Council of Health, in the absence of Dr. John Sundwall who was called away unexpectedly.

The first paper was read by Mr. Abel Wolman, Chief Engineer, Maryland Department of Health. His title was "Man's Relation to His Environment." Mr. Wolman said that at one time the emphasis in public health control has been placed on environment and at another on heredity. As in the cold analysis of all wars, we now find both factions partially right, and that all banners are partially useful. The origin of environmental problems is man's desire for food, shelter, creative activity, and defense.

The importance of food as an environmental factor has only recently been recognized, but this and other discoveries by no means lessen the importance of the fact that safe water and milk, and the disposal of human wastes still have vast implications in the prevention of disease. Civilization has many debits to its ledger, of which bad housing is an excellent example. Modern families in cities are subjected to a process of warehousing and herding together without regard for their environmental hygiene. The factors of air motion, temperature, and relative humidity have long displaced excessive carbon dioxide as causes of discomfort in medical knowledge, if not yet in state laws and regulations.

In the past environmental control has been limited to its negative phase—the elimination of "accidents" such as typhoid fever, malaria, and cholera. The positive effects of such things as housing, ventilation, and heating are yet to be controlled. "It is conceivable that the scientist may continue to attack disease through two media, environmental and individual, with more fruit to his program than by abandoning each one in turn when new standard bearers appear in succeeding years. The public, volatile in mind and in action, delights in changing flags. It is the scientist who should apply the brakes to skidding principles of action."

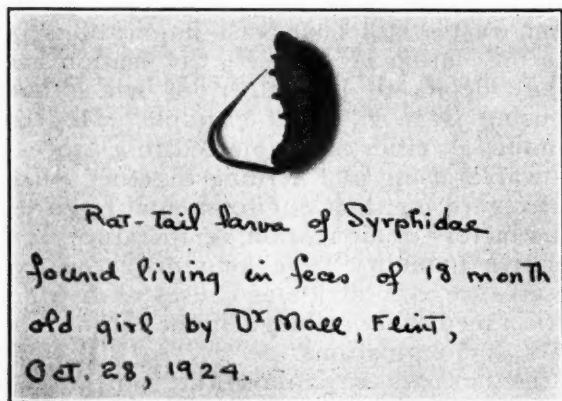
The Public Health Administration Forum was led by Dr. C. C. Slemons in the absence of Dr. Olin. Various questions of practical

interest to both health officers and nurses were brought up for discussion.

The closing number on the Conference program, the Tuberculosis Forum, was presided over by Blanche H. Rose, of Grand Rapids. Lucile Tenney of the Ingham County Tuberculosis Society told of the Society's clinic follow-up and of their summer camp activities. Gertrude Lee of Jackson County, also discussed follow-up, and described her plan of co-operation with the county nurse.

A number of social events, and section meetings were held in connection with the Conference. A tea for women guests was given on Wednesday by Dr. Blanche M. Haines and Miss Marjorie Delavan, and a second tea was given on Thursday by the Lansing District, Michigan State Nurses' Association. The Michigan Full Time Health Officers Association held a dinner meeting on Thursday. An all day conference of water purification and sewage disposal plant operators was conducted by the Bureau of Sanitary Engineering on Friday. A dinner was given by the Laboratory Section, Michigan Public Health Association, and the Lansing Branch, American Society of Bacteriologists on the same evening.

A CASE OF INTESTINAL MYIASIS DUE TO THE
RAT-TAIL LARVAE OF SYRPHIDAE



Intestinal myiasis due to the larvae of *Eristalis tenax* of the Family Syrphida, Order Diptera, is not of common occurrence. The case herein reported may hence be of interest.

The adult form of the insect is known as the drone fly, a large fly resembling the drone honeybee. The eggs are deposited in liquid manure, or other filthy liquids or in decayed peaches. Infection of children may, therefore, occur through eating decayed fruit, drinking grossly polluted water, or playing on polluted soil. The larvae are commonly described as rat-tail larvae, because of the long anal breathing tube as shown in the photograph. They are a little

over three centimeters in length, including the breathing apparatus, and, when alive, show a considerable activity.

Because of the fact that liquid excrement is a normal depository for the eggs of this insect, Herms¹ cautions against too ready acceptance of reports of such larvae as passed in a stool. Hall and Muir² have brought together the reported cases up to 1913, giving cases which are apparently incontrovertible, and Hall³ has added further records bringing together a total of seventeen cases in which the rat-tail larvae were claimed to be present in the digestive tract of man. The conditions in the stomach simulate the normal conditions for the living larvae, inasmuch as there is sufficient air and food for their growth. Activity in the stomach induced by the eating of food by the patient may well account for the irritation with vomiting which is quite a common symptom.

On October 29th, 1924, a specimen of a rat-tail larva was received by the laboratories of the department from Dr. Carl F. Moll, of Flint, for identification. The larva had been passed in the stool of an eighteen-months-old girl, and was alive when passed. Report was made that the specimen was a larva of a Syrphida, and later the identification was checked by Prof. R. H. Pettit, professor of entymology at the Michigan Agricultural College. The following report of the case is quoted from a letter from Dr. Moll.

"Herewith is a history of the case: I was called to see the child in the afternoon. She was crying as though in very severe pain. Diagnosis of intestinal colic, due to improper diet, was made, and a prescription of calomel, ipecac, and soda was given. The following morning, after a large enema, sixteen larvae were passed, most of them being alive. Since that time, none have passed, and she has enjoyed excellent health. The family say that she is a dirt-eater, and they have to be constantly on guard to keep her from picking things up in the garden and eating them."

The case is obviously an intestinal myiasis with the Syrphida larvae as the cause, and the source of infection is in little doubt.
M. S. M.

REFERENCES

- (1) Herms, Medical and Veterinary Entymology, 2nd Ed., 1923, p. 298.
- (2) Hall and Muir, Arch. of Intern. Med., II, 193, 1923.
- (3) Hall, Arch. of Intern. Med., XXI, 309, 1918.

MICHIGAN HOURS OF SUNSHINE AND RICKETS

In view of the seasonal incidence of rickets with its peak in the winter and early spring months, together with the observations made by Dr. Alfred Hess and others

on the relation of rickets to the filtering out of the ultra-violet rays from sunlight by fog, clouds and smoke, the question arises whether Michigan has in rickets a deficiency disease due to its climatic peculiarities.

Granting the filtering out of the ultra-violet ray from sunshine as a factor in the development of rickets, it seems that Michigan has fewer hours of sunshine than most states in the Union owing to its position between the Great Lakes as well as to its latitude.

For comparison we submit the annual number of hours of sunshine and percentage of sunshine for all points of observation of the weather bureau for Michigan and some widely scattered points in other states. This material is from U. S. Agricultural Reports, Report of Chief of Weather Bureau for 1922-1923.

MICHIGAN

	Hours	Percentage
Alpena	2110	44
Detroit	2635	57
Escanaba	2445	54
Grand Haven	2490	53
Grand Rapids	2227	47
Lansing	2586	55
Ludington	2661	56
Marquette	2121	46
Port Huron	258	55
Saginaw	2644	56
Sault Ste. Marie	2170	46

OUT STATE

	Hours	Percentage
Albany, N. Y.	2413	53
Amarillo, Texas ..	3469	77
Bismarck, N. D. ...	2828	62
Bois, Idaho	2935	62
Boston, Mass.	2514	55
Charleston, S. C. ...	3134	70
Chicago, Ill.	2854	62
Columbus, Ohio	2719	60
Indianapolis, Ind. ...	2876	63
Denver, Colo.	2832	63
Pittsburgh, Pa.	2742	60
Portland, Me.	2406	53
Richmond, Va.	2601	57
St. Louis, Mo.	2792	62
San Francisco, Cal. ...	3213	71
Seattle, Wash.	2163	46
Tampa, Fla.	2840	64
Trenton, N. J.	2681	59
Vicksburg, Miss.	2721	60
Wilmington, N. C. ...	2845	63
Washington, D. C. ...	2477	55
Yuma, Arizona	4006	90

At no point of observation in Michigan did the percentage of sunshine reach 60 per cent, while many points outside Michigan recorded above 60 per cent.

The Michigan Department of Health has tabulated defects noted in the examination of 7,650 infants and preschool children, that is, children less than five years of age.

The following findings may be classed as rickets or conditions due to calcium deficiency or assimilation:

Active rickets	441
Bone and muscle defects	927
(This includes old rickets, bowlegs, knock knees, beaded ribs, pigeon chest, etc.)	
Decayed teeth	1,288
Total	2,656

A total of 34 per cent of all children examined showed either active or old rickets or a deficiency in calcium assimilation. Unquestionably the figures submitted would have been larger had the skeletal deviations from normal always been carefully noted.

In the absence of sunlight containing the ultra-violet rays, undoubtedly the anti-rachitic factor is best supplied by cod liver oil in small preventive doses.—B. M. H.

CONDENSED MONTHLY REPORT

Lansing Laboratory, Mich. Depart. of Health, Dec., 1924

	+	-	+ -	Total
Throat Swabs for Diphtheria				4215
Diagnosis	139	744		
Release	361	1106		
Carrier	34	1800		
Virulence Tests	22	9		
Throat Swabs for Hemolytic Streptococci				3882
Diagnosis	206	640		
Carrier	142	2894		
Throat Swabs for Vincent's	17	797		814
Syphilis				8654
Wassermann	847	3463	87	
Kahn	925	3265	67	
Darkfield				
Examination for Gonococci	195	1783		1978
B. Tuberculosis				390
Sputum	54	336		
Animal Inoculations				14
Typhoid				143
Feces	15	63		
Blood Cultures	2	16		
Urine	1	2		
Widal	11	33		
Dysentery				1
Intestinal Parasites				26
Transudates and Exudates				106
Blood Examinations (not classified)				219
Urine Examinations (not classified)				284
Water and Sewage Examinations				492
Milk Examinations				51
Toxicological Examinations				6
Autogenous Vaccines				6
Supplementary Examinations				277
Unclassified Examinations				743
Total for the Month				22287
Cumulative Total (Fiscal year)				115854
Increase over this Month last year				4043
Outfits mailed out				16991
Media Manufactured, c.c.				338276
Diphtheria Antitoxin distributed, units				
Toxin Antitoxin distributed, c.c.				
Typhoid Vaccine distributed, c.c.				225
Silver Nitrate Ampules distributed				4004
Examinations made by Houghton Laboratory				1049

The Journal

OF THE

Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

PUBLICATION COMMITTEE

R. C. Stone, Chairman.....Battle Creek
C. D. Darling.....Ann Arbor
J. D. Bruce.....Saginaw

Editor and Business Manager

FREDERICK C. WARNSHUIS, M. D., D. Sc., F. A. C. S.
Grand Rapids, Michigan

Entered at Grand Rapids, Michigan, Postoffice as second class matter.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 7, 1918.

All communications relative to exchanges, books for review, manuscripts, news, advertising and subscriptions are to be addressed to F. C. Warnshuis, M. D., 4th Floor Powers Theatre Building, Grand Rapids, Michigan.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$5 per year, in advance

FEBRUARY, 1925

Report Malpractice Threats Immediately to Doctor F. B. Tibbals, 1212 Kresge Building, Detroit, Michigan.

Editorials

THE INDIVIDUAL PHYSICIAN AND THE AMERICAN MEDICAL ASSOCIATION

Why a Fellow?

"Why should I be a Fellow of the American Medical Association?"

"In what way does its activities affect me, the individual practitioner of medicine?"

These are fair questions. You who are invited to be a Fellow have a right to ask for evidence that the Association is functioning actively in the interests of physicians. The following partial inventory of its activities is therefore presented. It shows in a brief way what the American Medical Association means to physicians individually and to the profession in general. Every member in good standing is eligible for Fellowship. All that is necessary to qualify is to make application and subscribe for The Journal.

How the American Medical Association Functions

A large, nation-wide organization must necessarily delegate its activities to smaller bodies or to individuals. The House of Delegates of the Association determines its

policies. The Board of Trustees is the governing body in the interval and is charged with the duty of administering the affairs of the Association.

The work of the American Medical Association is carried out largely through its executive officers, its various councils, its bureaus and its publications. Every Fellow and member should consider these as his representatives.

Council on Medical Education and Hospitals

This body has brought the standards of both premedical and medical education to a basis by which they are recognized throughout the world. Through its activities, extremes have been avoided, although college entrance requirements have been raised to a reasonable point, college sessions have been lengthened, courses reorganized, better buildings and laboratories secured, better equipment provided, including libraries and museums, more and better teachers employed, better clinical material obtained and more improved methods of teaching adopted. Detailed information concerning all schools is maintained in the secretary's office. Undergraduate institutions are inspected and rated as "Class A," "Class B" or "Class C." All possible co-operation is given to a institution in its effort to raise its classification. There are now seventy "Class A" schools and the opportunities for a medical education in America are equal to those found anywhere.

In co-operation with state licensing boards, the Council works to secure better reciprocal relations for physicians and to improve medical practice laws. The Council also has elaborate facilities through which detailed information in regard to all medical students and physicians is regularly collected, and kept on file. This makes it possible to recognize and support the legally and educationally qualified professional man and to expose quacks, healers, "impostors and incompetents." In short, the Council stands as a guard to keep the medical field from being overrun and discredited by entrance of the unfit. Its resources have been used with telling effect in the past, and continue in use today to protect the interests of those who are now legally qualified to practice medicine.

Biographical Department

This department is under the supervision of the Council on Medical Education and Hospitals. Since 1905 it has been collecting personal data regarding licensed physicians and medical graduates for a biographical card index of physicians of the United States and Canada. These records are avail-

able to all Fellows of the Association. They enable members of the profession to keep tab on location, society affiliations, specialty, teaching connection and other personal data concerning colleagues. These data may be obtained either by writing to the Biological Department or by consulting the American Medical Directory, which is issued every two years and is a reliable, authentic register of over 95 per cent of the members of the profession.

Hospital Department

This department keeps data on more than 7,500 hospitals and sanatoriums in the United States and Canada. It is at the service of each Fellow of the Association. It has facilities for telling him about institutions for unusual cases, for assisting in staff organization, for giving information regarding physician's office buildings, group clinic buildings, combined offices and residences and hospital building plans; advice about the problems of cults in hospitals, data on group clinics, dispensaries, laboratories and general information regarding all hospitals whether general or special.

Council on Pharmacy and Chemistry

Through the Council on Pharmacy and Chemistry, the Association offers protection to physicians in choosing proprietary remedies. Sixteen scientific men, each an authority in his special field, make up the Council. Newly introduced medical preparations are considered in the light of cold, scientific evidence. The findings are reported in *The Journal A. M. A.* and in the book "New and Nonofficial Remedies," issued annually. Here the physician can check up on claims made for medical preparations which he may be urged to use. In many cases, the Council finds that certain remedies marked under proprietary names and at exorbitant prices, are no more efficacious than the ordinary U. S. P. products. Many preparations are discovered to be irrational mixtures, many utterly inefficient for the purposes for which they were made. Fellows of the Association are privileged at any time to obtain information from the Secretary of the Council relative to medicinal preparations.

Propaganda Department

This department is a clearing house of data on patent and proprietary medicines, all forms of quackery and fake cures. The practical value of this information is proved by the thousands of letters of inquiry that are received annually by the Propaganda Department from physicians in every state in the Union and practically every foreign

country of any size. Any physician desiring specific information on some preparation can feel free to write to the Propaganda Department asking for details and facts. Each letter of this kind is given careful answer, and in the majority of cases, it is possible to send pamphlet or reprint of an article on the subject of his inquiry.

At times, the physician may wish to give a talk before his local Kiwanis or Rotary Club on some phase of the nostrum evil or quackery. The Propaganda Department is always glad to send him data in the form of pamphlets and for a nominal fee will rent a set of lantern slides that may be used effectively in illustrating the talk. Forty large educational posters dealing with practically every phase of quackery and the nostrum evil are also available for health exhibits. These can be purchased for a nominal sum and in certain instances, the Propaganda Department donates a set of posters to the cause.

Bureau on Health and Public Instruction

The Bureau of Health and Public Instruction seeks to educate the public through the columns of *Hygeia*, a monthly magazine of individual and community health, by the dissemination through lay publications of carefully prepared articles, and through a series of instructive pamphlets written by recognized medical authorities. The Bureau also offers assistance in the compilation of material for addresses on health topics by supplying abstracts and illustrative material.

Health items from *Hygeia* are being broadcasted from a number of radio stations and inserted in newspapers throughout the country.

Health material—posters, pamphlets, etc., are shown at health exhibits of lay associations. The Bureau co-operates, where possible, with other organizations such as the National Educational Association in promoting health activities. The Bureau undertakes the study of special problems assigned to it, such as the periodic medical examination of the apparently healthy.

Each year, thousands of pamphlets on baby welfare, sex education, contagious diseases, cancer, school health problems and other subjects, are distributed.

Bureau of Legal Medicine and Legislation

This Bureau keeps in touch with legislation and court decisions of interest to physicians, such as those relating to the prescribing and dispensing of liquor and narcotics, income and other taxes relating to the practice of medicine, quarantine laws, vaccination, medical malpractice, protection of scientific research, etc. Information and

experience collected by the Bureau is available to all Fellows and members of the Association through their respective state medical societies.

A. M. A. Library

The A. M. A. Library, while not pretentious, has very good facilities for rendering service to the profession. More than 250 medical journals, domestic and foreign, are regularly received, abstracted and indexed. These abstracts are available through the columns of *The Journal A. M. A.* A complete index of all articles currently published is arranged both by subject and author and furnished in the *Quarterly Cumulative Index to Current Medical Literature*. Any Fellow of the Association is entitled to use the facilities of the library and to call upon the library for a list of references on any medical subject of interest. Any foreign medical journal on file in the library can be borrowed for a reasonable length of time without charge. A package service has recently been established through which members can secure, for temporary use, original articles on a variety of subjects.

Publishing Department

By developing its own printing plant, the Association is able to furnish medical publications at a great saving. This department includes extensive type equipment, linotype machines, flatbed and rotary presses and necessary bindery machinery for producing medical journals, books, pamphlets and supplies on a large scale, and at a reasonable cost. For example, the weekly issue of *The Journal A. M. A.* in one year make a total of more than 4,000 pages of reading matter attractively illustrated and well printed on good quality paper. The cost is but \$5.00, including Fellowship dues. *Hygeia*, the lay health journal, at \$3.00 per year is printed on the Association's presses and compares in typography, illustrations and general attractiveness with other high grade magazines. The printing department also makes possible several special journals—"Archives of Internal Medicine," \$5.00 per year; "American Journal of Diseases of Children," \$4.00 per year; "Archives of Neurology and Psychiatry," \$8.00 per year; "Archives of Dermatology and Syphilology," \$8.00 per year; "Archives of Surgery," \$8.00 per year, and "Archives of Otolaryngology," \$6.00 per year. Journals such as these necessarily have a limited appeal and would have to have a much higher subscription rate if printed by private concerns. This also applies to the *Quarterly Cumulative Index to Current Medical Literature*, which gives the user a reference to practically all worth-

while articles, yet is furnished at a cost of \$8.00 per year.

The American Medical Directory is another publication made possible by the facilities of the Association. This is issued every two years. It is a book of about 2,500 pages and gives minute personal data on 95 per cent of the physicians in the United States and Canada and about 7,500 hospitals. It is furnished at a cost of \$15.00.

In addition to the regular periodicals issued by the Association, hundreds of thousands of circulars, reprints, leaflets, posters, etc., bearing on medical and health topics are printed and distributed annually.

Co-operation with State Associations and County Societies

Through the office of its Secretary and through its Councils and Bureaus, the Association endeavors to keep in touch and to co-operate with state medical associations and county medical societies for the promotion of the welfare of the individual physician.

A. M. A. Bulletin

The Bulletin goes each month, except July, August and September, to all Fellows of the Association. Its columns are given over to the discussion of subjects pertaining to medical economics, medical organization and matters of general professional interest.

Information Service

The bureaus and departments of the Association reply to many thousands of letters each year, answering requests for information in which physicians are interested. Thus the various offices of the Association constitute a veritable service bureau for the benefit of its members.

Catalogue

A catalogue and price list of the publications of the Association may be had for the asking.

Visitors Welcome

Members and Fellows are urged to visit the offices of the Association and to look over its plant and its work.

In Conclusion

Thus, in many ways, the Association is functioning in behalf of the individual physician. The benefits from its various councils, from its resources and its facilities are real and tangible. To take a full share in continuing and expanding its activities is the privilege of each physician who is a member, in good standing, of his county and state medical organizations. The annual dues for Fellows of the Association are \$5.00. This includes subscription to *The*

Journal of the American Medical Association and to the A. M. A. Bulletin. The subscribers to The Journal now total almost 85,000 and of this number more than 54,000 physicians hold A. M. A. Fellowship cards.

Our members are urged to affiliate.

MORE BUREAUCRATIC PROPAGANDA—CHILD LABOR AMENDMENT

The attempt to amend the Constitution of the United States for the purpose of invading American homes and controlling the child is another effort on the part of propagandists to fasten upon the people all the baneful results attendant upon bureaucratic policies. Miss Julia Lathrop, who is actively engaged in propaganda work and whose efforts may be questioned, recently appeared before the Grand Rapids Rotary Club sponsoring the enactment of the proposed amendment. At a subsequent meeting of the club one of the editorial writers of the Press, Mr. Woodruff, replied to her argument. In as much as the subject is one of interest to the profession we are grateful for being able to publish this reply which is as follows:

Perhaps there is no better introduction to the subject than to recall that Miss Lathrop, a highly educated, most intelligent and shrewd advocate, stood upon this platform three weeks ago and appeared before another local audience the same night in the defense of the proposed twentieth amendment, emphasizing that it was in no sense a Bolshevik measure, that it had the support of a long list of women's clubs and the American Federation of Labor, that it was the logical successor to two child labor acts declared unconstitutional by the supreme court, and that it was the sort of change the fathers of the Constitution hoped we, their heirs and successors, would make when their imperfect document came down to us.

It is one of the oldest devices of debaters to concentrate upon the weakest points of the opposition. Miss Lathrop rang all the changes upon the charge, made in the course of the recent referendum campaign in Massachusetts, that this was a "Red" or "Radical" or "Socialist" measure. In the heat of a campaign and for the political effect of catchwords many points are made which would not be offered quietly in reasonable discussion. Miss Lathrop is absolutely right in her contention that the child labor amendment is under no conviction of "Radicalism" merely because Mrs. Florence

Kelly, its initiator, was once married to a person of Russian extraction. Neither is it necessarily "Radical" because Victor Berger happened to like it; nor because Owen Lovejoy, head of the National Child Labor committee, happened to be a friend of Gene Debs.

In fact, it is a waste of time even to call it "Socialistic." Issues must stand on their own feet in intelligent discussion, not be thrown out or accepted because of some party tag attached to them. If we were to catalogue all the reforms throughout recent American political history which had the platform support of the Socialist party we should not know where to call a halt. For a few examples, there are the women's suffrage amendment, higher income and inheritance taxes, workingmen's compensation, factory safety inspection, and federal waterpower control. Moreover, if the grant of power contained in the twentieth amendment—the power to limit, regulate and prohibit the labor of persons under eighteen years of age—is in itself Socialistic, then obviously every state in the Union has a constitution honeycombed with Socialism. For there is not a state without the power, at this very day, to limit, regulate and prohibit the labor of minors all the way up to twenty-one.

However, it is absolutely unnecessary to tar the proposed twentieth amendment with the pitch of Socialism in order to condemn it in the minds of any American devoted to the historic traditions of this nation. In the first place, it is being borne in upon our federal union as time goes on and government pries increasingly into business that federal or centralized regulation of private life should be substituted for state and local regulation only in the face of the most obvious and overwhelming necessity. I shall attempt to demonstrate to this fact, and then to show that the child labor amendment is offered in answer to no such vital public demand, that its evils one by one are being met, and that as a matter of fact it is of that particular type of proprietary interference which least well adapts itself to federal control. In short, that there is no call for us to make an exception to the rule of keeping the national government in its own sphere and the states in theirs.

Miss Lathrop was particularly careful to point out that the constitutional fathers, as proof that they thought their Constitution needed amendment, changed it themselves no less than ten times in the first session of congress. But Miss Lathrop was equally careful to overlook the fact that every one of these first ten amendments sought to

protect the average American citizen against precisely the sort of regulation from Washington that the child labor amendment would permit. Each of the ten secured the individual in the free exercise of his conscience and his opinions, or in the conduct of his private pursuit of wealth and happiness, or in the regulation of his family. He was guarded by them against undue searches, seizures, quarterings, religious persecutions, fines, imprisonments, confiscations and the like; and, finally, assured that whatever was done outside the functions strictly reserved to congress would be done by his own state, and by neighbors closely enough acquainted with conditions so that he would be reasonably sure of just and sensible treatment. The police powers of the nation, in other words, were reserved to the states.

When we break into this reserved sphere of state action with a federal police statute, we substitute a distant, vague authority, largely and necessarily unacquainted with local conditions, for a state authority which has lived with and exercised police power over those conditions and whose enforcing officers are locally known and respected. We put in the hands of a great bureau at Washington powers and duties too large and intricate by far to be properly executed—and duties which often will not be executed where local sentiment objects to their application. As one writer has put it, "The government at Washington cannot successfully reach into the localities and enforce a legal standard of personal living which the bulk of the people of that locality do not support." Moreover, this action undermines that sense of local responsibility upon which the character and vitality of American democracy has always rested. The political body needs just as much exercise as the physical.

When Chief Justice William Howard Taft delivered the supreme court opinion declaring the second congressional child labor law unconstitutional he made this significant statement: "In the maintenance of local self-government, on the one hand, and the national power, on the other, our country has been able to endure and prosper for nearly a century and a half." The reminder that a just balance between these co-ordinate agencies, the nation and the state, is necessary to our national welfare is most decidedly needed in these days when every reformer is running to congress to get a law, a policeman and a club.

Only last month President Coolidge remarked: "The efficiency of federal operations is impaired as their scope is unduly en-

larged. The efficiency of state governments is impaired as they relinquish and turn over to the federal government responsibilities which are rightfully theirs."

If we accept, then, as a fact the statement that regulation of local affairs from Washington is unwise except in cases of the most pressing necessity, can we say that the need of a child labor amendment is of this exceptional type?

Let us admit, if you will, that there are some 185,000 persons under 16 in the United States engaged in industrial employment—some of them in noninjurious occupations to be sure, out of school hours and only part time, some of them cases where further schooling is futile and a sensible manual apprenticeship the best possible education. Let us admit that in a proportion of these cases the state is to blame, health suffers, and children are actually in some danger from which it might seem the states had fallen down on the job. And then let us turn back the leaves of the calendar twelve years, and consider a compilation recently made of the contrasts between child labor legislation then and today.

In 1912, only twenty-one states prohibited the labor of children under fourteen in factories and stores. Today forty-five states or all but three, prohibit it. In 1912 only twenty-one states prohibited the labor of children under sixteen in dangerous trades. Today nearly all states prohibit it, and many rise above that standard. States limiting the industrial work of children to eight hours a day have doubled in number. There are now thirty-one such states. All but five states now have some prohibition of night work. The educational requirement has been raised in many states, and nearly all have some educational minimum. Ten years ago less than half the states had a physical test to determine whether children might work. All but nine have it today. Ten years ago only six states required a physician to pass on a child's fitness to work. Today twenty-two states require it.

We may be reasonably certain that progress as marked as this will continue; that states will continue to be shamed and persuaded into meeting the genuine evils of child labor for themselves. The amendment might and might not speed the time when the few backward states would come up and toe the mark. In exchange for this brief setting forward of anti-child-labor effectiveness, actually required in any pressing sense in only three states of the Union, all the states together would be subjected to the inroads of that particularly exasperating and unreasonable species of trouble maker, the

federal investigator; a bureau at Washington would put a building and expand its officers, hire statisticians and add to the cost of government; another batch of pestiferous little cases would be dumped on the federal courts, whose dockets are already clogged with a mass of prohibition cases rendering the administration of substantial justice in important matters almost impossible. Meantime, with the removal of the sources of income from destitute families, from widows unable to find work and from children in states possessing no equipment to keep them in school until the age of sixteen, new responsibilities might be expected to crowd upon the federal government. The dole and subsidy system to pension mothers and provide standard schools, would be a more or less natural demand. Federal scholarships and federal regulation of education are the next step. If we wish to be sure not to reach this extravagant and costly stage, we had better not take the first.

As it is not only feasible, but in accord with American constitutional tradition to leave police activities to the states, why let ourselves in for a further federal usurpation of these activities? In the long run is not the cure worse than the evil we desire to eradicate? And would not a little time cure it anyway? That is the question I would leave with you.

It is an easy matter for advocates like Miss Lathrop to stand upon a platform and laugh away the suggestion that congress might go to all the excesses permitted by this blanket amendment, or even to avail itself of any considerable part of them. But it is not so easy to find ground for this confidence in the actual record of congress.

Congress when legislating in such matters is peculiarly the prey of the half-baked reformer, the easy meat of the forceful minority. It sits apart from our daily life, and no such watch and ward attends its daily action as is vigilantly turned upon every movement of a state legislature. When it was determined that congress possessed the constitutional right to assess income taxes, no one in his right mind would have supposed that in the space of a few years congress would interpret this permission to justify the spreading of a man's business secrets before his social peers and business competitors by means of the publicity of returns. Yet the thing has happened. In the face of congress' actual record Miss Lathrop's childlike trust in its temperance and self control is sanguine to say the least.

There is only one path of safety and of political wisdom—the path which will spare

congress even the temptation. In the long run the cure proposed would be more of a burden than the evil we wish to eradicate. And their progress of recent years offers ample ground for the belief that child labor will be brought by the states within its proper limits without the assistance of a long arm stretched from Washington to do their work for them.

DIPHTHERIA

Antitoxin in full dosage is recognized beyond any dispute as the only effective measure in the treatment of diphtheria. Toxin-antitoxin is likewise recognized as the only effective means for preventing diphtheria by creating an artificial immunity. It is to diphtheria what vaccination is to smallpox.

As a preventative and prophylactic measure the use of toxin-antitoxin should be urged by every physician. It is his duty to draw the attention of parents to this almost certain immunizing measure. It is the physician's duty and obligation to practically insist that parents themselves and their children receive toxin-antitoxin and to administer it.

Diphtheria is far too prevalent in Michigan. It need not be if a wider use of toxin-antitoxin is manifested. Diphtheria can be practically eradicated if a state-wide immunization is accomplished and the profession must recognize its responsibility and thus reduce our mortality and morbidity statistics.

Health departments and health officers are charged with the duty of reducing the number of infections and contagious diseases and to enhance the health environment of the public. These health officials realize that our diphtheria situation can be radically improved. They have reason to expect that the doctors will aid them by urging the use of toxin-antitoxin. If on the other hand, our health officials find that doctors are not using or recommending toxin-antitoxin, then it becomes obligatory for Health Departments to undertake to immunize the people against diphtheria. In doing so there can be no foundation for complaint on the part of doctors because Health Departments are undertaking to do what the profession is neglecting.

We therefore urge that County Societies undertake in their county a campaign of education of the people upon the subject of diphtheria. Such a campaign to be followed by planned arrangements for the immunizing against diphtheria of every person in that county. This is your individual duty and an obligation of your County Society. If you fail to recognize that duty and re-

sponsibility then don't complain, holler or rant because health officers step in and do what you are neglecting. They will be fully justified for it then becomes their duty.

We are certain that the State Department of Health and its local representatives will lend you every assistance and will undoubtedly furnish free the required toxin-antitoxin. It remains then for the profession to acquit itself and failing, for health officials to step in and do the job. Which course do you prefer?

COUNTY HEALTH OFFICERS

The problems and activities of health enhancement involve more than the tacking up signs or the serving of notices to remove garbage. Efficient health officers must be trained, instructed individuals. It is no longer a layman's job delegated to township citizens. Every county should have a County Health Officer charged with specific duties and so trained as to efficiently discharge them.

Some years ago such a bill was introduced in our legislature. It failed to pass. We understand that the present legislature has such a bill under consideration. We are advised that its provisions are sane and wise. We sincerely hope it will become a law. Like all bills, to secure passage, endorsement and urging are necessary. So to with this bill; it requires endorsement, support and the filing of requests for its passage. Here again County Societies can demonstrate constructive effort by the passing of a resolution urging the passage of a bill to provide county health officers. Draw up such a resolution, present it at your next meeting and send to the Editor a report of your action. We will see that your resolutions are presented to the proper legislators. We recommend such action by our County Societies.

DUES

To avoid error and obviate possible misunderstanding, attention is called to the following points:

The Annual Dues of the State Medical Society are \$10.00 per year.

They are to be paid to the Secretary of your County Society in addition to the local county dues.

The County Secretary will remit your dues to the State Secretary. Individual members are advised not to send in their State dues to the State Secretary.

An individual cannot join the State Society without first being a member of the County Society.

The State Secretary will send to each member his State Certificate when his state dues have been received from the County Secretary.

State dues for 1925 became payable on January 1st. It is urged that you make prompt payment to your County Secretary.

Editorial Comments

We intend writing about attendance, society activity, committee work, and membership responsibilities until desired results have been obtained. If you are getting tired of reading this type of comments, our only recommendation for the securing of relief is for each member to record an awakened activity and tangent results. Until then we purpose keeping everlastingly at it.

District clinical conferences were conducted at Bay City, January 22nd. Arrangements have been perfected for conferences at Adrian on February 12th, Jackson on February 19th, and Flint on February 29th. Members in these localities are urged to grasp these opportunities for attending what are proving to be most valuable meetings. Urge your neighboring doctor to accompany you.

To testify against a fellow physician is equivalent to making a bid for a malpractice suit against oneself. It is true, mistakes are made, but as a rule they are unintentional. They are really accidents. Because a fellow doctor has had an accident it is not a justification for you to testify against him. You gain nothing and you harm your fellowman as well as fostering, by encouragement, a suit against yourself or some other doctor. Far better will it be to remain neutral, rather than to criticize or condemn your fellow.

Do not forget your 1925 dues. Remit them to your own County Secretary, and please do it.

For a time the opinion was prevalent that many breast-fed babies were being overfed. The advice was common to do everything to prevent overfeeding. Four-hour feeding, so-called, was advised. Experience soon revealed that the danger of overfeeding had been unduly stressed and that the real danger was underfeeding. The opinion that now exists is that more new-born and young babies are underfed.

A short time ago we commented upon Dr. J. H. Kellogg's fifty years' service as editor of "Good Health." With the commencement of the sixtieth volume of "Good Health" and the fifty-third year of Dr. Kellogg's editorship we cannot resist comment on the publication itself. In the first place, it appears in enlarged form, with excellent paper and a demonstration of high grade typographical workmanship. It is well illustrated and physically its appearance is pleasingly attractive and commanding. Its reading contents is comprised of well written articles on food, health and biological living, subject matter upon which the public requires education and which we, as a profession, must convey to the public. "Good Health" is thus assisting us in our campaign of public health education and is doing so in an effective manner. "Good Health" is an asset to our professional work and we are proud that Michigan has such a publication. We extend congratulations to the editor and publisher.

Your old typewriter worn out? Do you need a new one? Well, your best buy is an Underwood, rebuilt by the Shipman-Ward Company. We know, for we are using them and can testify to their value. It is a machine that gives every satisfaction. It is new in every way and in appearance no one can tell it from a \$110 typewriter. See their "ad" in this issue. You can secure it for \$3.00 down. Secure one, for you will be fully satisfied and in addition you will be aiding us in the securance of an advertising contract. Please lend this assistance.

All our advertisers merit your patronage. They make your Journal possible. They are entitled to your business. We invite you to read our advertising pages and to support your publication committee in their effort to send you a better Journal.

Dr. Wm. Allen Pusey, president of the American Medical Association, and a recognized authority in dermatology, will be the invited guest of the Kent County Medical Society on the evening of February 25th. Dr. Pusey's subject will be: "Our Changing Knowledge of Eczema." A cordial invitation is extended to all physicians to hear this distinguished speaker.

Our Michigan State Board of Registration, by resolution, has agreed to recognize the certificates of the National Board of Medical Examiners and to issue Michigan licenses to holders of certificates of the national board.

It must be obvious as to why it is inexpedient to report in detail the activities of our Legislative Committee. We can assure our members that we have an active, aggressive, alert committee that is functioning one hundred per cent. The committee requires co-operation and it is urged that their communications to officers receive prompt attention and compliance.

They relate that an uncanny and embarrassing sensation is experienced by a speaker or singer broadcasting a speech or a song to unseen audiences through a microphone. We can readily appreciate the nature of such a sensation by reason of our editorial experiences. An editor speaks, by means of writing, to an unseen audience of readers. He often wonders if they are dumb, spellbound, paralyzed or without typewriter, pen, ink or postage stamps. He is entitled in a measure to such an opinion. Recently we made two requests: One, that members send in well worked case reports for publication; the other, that members send in to our department, "Among Our Letters," queries, comments, opinions or suggestions on any topic of interest to the profession. Thus far there has been a mighty silence. We repeat the request and trust that a desired response will result.

The Annual Secretaries' Conference will be held in Grand Rapids on April 22nd. County Secretaries are invited to note the date and plan to be in attendance. A profitable program is being arranged and it is anticipated that some pleasing entertainment will be provided.

Between cross-word puzzles and radio health talks the day is far too short to accomplish all that lies before one. Telephone calls are frequent from friends and patients seeking the name of the "shin bone," "surgeon's circular saw," part of the eye beginning with 'i' and of four letters," etc., and also, whether the advice to "lie down on one's bedroom floor with the windows open and do a rolling act, might not induce pneumonia," etc. Possibly a fortune awaits

one if he formulate into book form "Medical Terms Used in Cross-word Puzzles," and then somebody please arrange to censor some of these radio health talks given by lay workers or clinic attendants. We are sure we all will be relieved of answering foolish telephone inquiries.

Chicago has ever had reason for recognition, but now more than ever it can lay claim for distinction as being the only city in the world where it is necessary "to steal water." The United States Supreme Court, however, has decreed that the thieving must cease within ninety days. Poor Chicago, it will have to look around for new fields to conquer. We suggest it continue to fill in it's lake front so that in due time it can be attached to Michigan and become a suburb of Benton Harbor.

Wayne county has set a splendid example by it's Beaumont Lectureship Courses. Announcement is also made of an Orthopedic Foundation with the first oration to be given on March 16th, by Robert B. Osgood, M. D., Professor of Orthopedic Surgery at Harvard. The subject of his lecture will be, "The Evolution of Orthopedic Surgery." We hope to be able to give a synopsis of the Beaumont Lectures given by Doctors Chas. Mayo and H. S. Plummer on January 26th, in our next issue. These Foundation Lectures are a splendid educational feature of County Medical Society activity. With Wayne's successful inauguration of such lectures, several of our other County Societies might well and readily undertake similar courses. We look toward a spreading of such plans about the state.

The minutes of the January Council Meeting and of the Joint Committee on Public Health Education will be found in this issue. Especial interest is urged in the work of the Joint Committee. Every County Society should sponsor at least six of these meetings in their county before May 1st. It's time you were putting a committee at work on this activity.

A statement was published last month imparting that by reason of Dr. B. D. Harison's death his widow was left in straightened circumstances. Voluntary contributions were solicited for her relief. At the time of going to press the following contributions have been received:

A. W. Hornbogen	\$ 25.00
Dr. Sawyer	25.00
Guy L. Connor	100.00
Staff, Grace Hospital	1,175.00

In our editorial last month on Endowments we advanced the suggestion that there were those who were blessed with financial resources who could readily make a contribution of from \$500 to \$10,000 to establish an Educational Fund for our State Society. At this time we desire to extend an invitation for such contributions. Who among our members is willing to make the first contribution? A nucleus is requisite before we undertake personal solicitations. It is a most worthy cause and one that will reflect its influence upon the profession for years that ever continue to lie before us. May we not have a response? Will not several start the movement? The principal will be deposited in trust and its earnings will be expended solely for the medical advancement of our members. We look for your response.

Judging from experiences the public is overly eager to obtain reliable information upon personal health preservation. Public meetings are well attended and dependable literature is sought and read with avidity. Our responsibility is to see that the public

receives authentic information. County Societies are neglecting their work if they do not instigate these public meetings. Periodical physical examinations should be urged and its value indicated. We trust that this problem will receive consideration by every County organization.

Speaking of committees, the incoming President of each County Society annually appoints a list of committees. Except in isolated instances that constitutes committee activity. We urge that County Presidents this year use the "big stick" on their commit-

tees. Especially do we recommend that the Committee on Public Health Education be prodded and that they conduct a series of public meetings in conjunction with the State Joint Committee. Get busy, men, and cut out this attitude of letting "Tom do it."

We invite attention to our County Society news pages. Ascertain what your sister societies are doing. Pick out the best from these reports and institute those features in your county. We commend these reports to your study with the hope that they will serve as an inspiration.

Minutes of the Mid-Winter Meeting of the Council

Pursuant to the action taken at the special meeting of the Council held in Detroit in December, a quorum of the Council convened in the Post Tavern, Battle Creek, at 9 a. m., January 14th, 1925 with Chairman Jackson presiding. The following were present: Jackson, Stone, McKenzie, Greene, Corbus, Randall, Darling, President Clancy, Executive Secretary Smith and Secretary-Editor Warnshuis.

Medico-Legal Committee Report

Dr. F. Tibbals, Chairman of the Medico-Legal Committee, submitted the following annual report:

Detroit, Mich., January 10, 1925.

To the Council:

Michigan State Medical Society.

Gentlemen:

The 1924 work of the Medico-Legal Committee was eminently satisfactory. The total number of cases reported was 34 as against 39 in 1923, but the total number of cases tried was 16 as against 9 in 1923. These 16 cases were all won with the exception that in one case the associated insurance company settled during the trial for \$100.00. It is, of course, understood that the expense of trial to us depends largely on the number of days the trial continues and we have been fortunate this year in having no especially hard fought cases. Our cash balance at the end of the year was \$4,458.38, in addition to which we placed \$1,000.00 in our sinking fund during 1924. Despite the fact that the expense of legal defense has increased greatly since the war, we have been successful, through our local organization in each county, generally, in securing strong professional backing for the defendant and this makes the defense comparatively easy. As we have previously pointed out, cases of actual malpractice from the professional viewpoint are exceedingly rare, but in any community with a disorganized medical profession it is sometimes possible to secure professional support for an unjust case. Wherever the profession is harmonious and united, malpractice suits seldom arise and almost never are successful. Illustrating this last statement, we cite one county in which, during 1924, there were six cases reported, four of which went to trial. The inception of this large number of cases in this county society with less than 75 members is, we think, more attributable to the hungry lawyer than to the jealous doctor. We reach this conclusion because we are not aware of any lack of professional harmony in this county and especially because in the defense of these cases the profession stood together in a solid phalanx. As a result of this professional unanimity

the four trial cases were won easily and the two other cases have been dropped and we predict that this county will be immune from malpractice suits for some time to come. Nineteen hundred twenty-four completes fifteen years of this work under the supervision of almost the same personnel. Three members of the executive board have served since 1910 and our very efficient attorney, Mr. H. V. Barbour, has served the same length of time. We believe that much of the success of this work in Michigan is due to the unchanging policy adopted at the start. This policy consists of a fighting defense for practically every unjust charge arising out of the practice of medicine and the long experience in this class of work gained by our attorneys make them far the best trial lawyers in the state for malpractice cases.

Respectfully submitted,

F. B. TIBBALS,

WILLIAM J. STAPLETON, Jr.

On motion of Randall-LeFevre the report was adopted.

On motion of Randall-LeFevre the annual honorarium for the Chairman of the Medico-Legal Committee was fixed at \$1,000.00. Carried.

Secretary-Editor's Supplemental Report

Secretary-Editor Warnshuis submitted for the Council's information the following supplemental report:

To The Council:

This supplementary report to my annual report rendered in December is submitted at this time to impart general information upon the present state of our organizational activities.

1. *Annual Meeting*—Tentative details have been discussed with the General Chairman of the Committee on Local arrangements of the Muskegon County Medical Society. A meeting of the section officers has been called for January 28th, at which time the features of the scientific program will be determined.

2. *Post-Graduate Medical Conferences*—Since the last meeting of the Council one conference has been held at Niles. Three conferences will be conducted during the latter part of this month. Our plans call for the holding of district conferences so that all the Councilor Districts will have been covered by May.

3. *Increased Dues*—From reports received every County Society has enthusiastically endorsed the increase of our dues.

4. *Legislation*—I am pleased to report the functioning of an alert, active legislative committee. It must be plainly obvious as to why details of their activity cannot be outlined. The assurance is registered that our State Committee is attending to our

legislative interests and that it has the co-operative support and assistance of the Wayne County Legislative Committee. It is urged, however, that Councilors forcibly impress upon the officers of the County Societies of their district, the need for prompt compliance to requests sent them by mail communications.

5. *Endowment Fund*—Your Secretary recommends that formal action be taken authorizing the raising of an Educational Endowment Fund. The principal of the fund to be held by the Council in trust and the earnings of the fund to be disbursed for the expenses connected with post-graduate medical educational work among our County Societies and members.

F. C. Warnshuis,
Secretary.

Annual Meeting Date

On motion of LeFevre and McKenzie, September 8, 9 and 10th was fixed as the date for the holding of our annual meeting in Muskegon. Carried.

Honorary Members

On nomination of Randall and Corbus, Dr. C. B. Burr of Flint and Dr. Joseph McNeece of Morley, were recommended to the House of Delegates for election as honorary members.

Legislation

The Secretary and Executive Secretary reported in somewhat detail the work that had been done in regard to legislative matters. The Council engaged in a general discussion of the subject and commended the work of the committee with special mention of Dr. Bradley, Davey and McCutcheon.

Diphtheria Prevention

On motion of Randall and Greene the need of activity on the part of the County Societies to aid in the prevention of diphtheria and the use of toxin-antitoxin was recommended. County Societies are urged to become actively interested in this health measure.

County Health Officers

On motion of Darling and Greene, the endorsement of the bill to provide county health officers was referred to the Executive Committee with the recommendation that Dr. Olin be invited to a conference for a discussion of the subject.

Tuberculosis Education

The Council authorized the Committee on County Societies that is in charge of the Clinical Conference to join with the State Association in the matter of Tuberculosis clinics.

Endowment Fund

On motion of Randall and Greene, the Secretary was authorized to solicit an endowment fund. Carried.

Minutes

On motion of Greene and Stone, the minutes of the Special Meeting of December

were approved and ordered incorporated as part of the minutes of this regular session of the Council. Carried.

The Council adjourned at 12:30 to join the Joint Committee on Public Health Education in their regular quarterly meeting.

F. C. WARNSHUIS, Secretary.

Among Our Letters

NOTE.—This department is the open forum of our members. Your communications and discussions are welcomed. Anonymous communications cannot be accepted, though at times names may be omitted by the Editor. Personalities will not be printed and responsibility for opinions is not assumed. We invite your interest in this department. Address: The Editor, Journal, Michigan State Medical Society, Powers Theatre Bldg., Grand Rapids, Mich.

January 14th, 1925.

Editor of The Journal:

You may be interested in publishing some of the details regarding the death of Dr. John Hunter of Sydney, Australia, who, with Dr. N. D. Royle, came to America at the invitation of Dr. William J. Mayo and Dr. Franklin H. Martin to deliver the John B. Murphy Oration in Surgery at the meeting of the Clinical Congress of the American College of Surgeons, held in New York, October 20, 1924. The work of Dr. Hunter and Dr. Royle in connection with spastic paralysis created unusual interest among the surgeons, orthopedists and neurologists of the world.

After the New York meeting, Dr. Hunter went to London, and the following letter from Dr. G. Elliot Smith, Professor of Anatomy, University of London, University College, gives the details of Dr. Hunter's visit in London, of his illness, and of his death:

"December 16, 1924.

Dear Dr. Franklin Martin:

In reply to your cablegram which has just reached me, I can tell you in a few words of the little there is to say about the terrible tragedy of poor Hunter's death. He arrived in London on 22nd November, apparently in exceptionally good health and full of energy. He threw himself at once into the business of demonstrating his work to the Physiologists and Clinicians in London, and gave a number of Lectures, and was going to start a more formal course on 8th December. On 3rd December he went to Cambridge, and was very busy there with informal discussions as well as Public Lectures. He returned to London on 6th December because he was not well. On the following day, 7th December, it was found that he had a temperature of 104.6 and I got our best physician, Dr. Charles Bolton, to see him, and he sent him into hospital suffering from the most virulent form of enteric that Dr. Bolton had ever seen. His temperature remained at about 105 until the 10th December, when signs of cardiac failure showed themselves, and he died on that day. He was delirious a good part of the time and almost unceasingly talked about his experimental work. It appears that he had been ill from 1st December, but took no notice of it; as he was so absorbed in the task of convincing people here the truth of his results that he went about six days after the onset of the illness without realizing that he was seriously ill. He must have got the infection soon

after leaving Quebec on 14th November. The whole business is unspeakably tragic, because he was certainly the most promising anatomist that we had, and I feel convinced that if he had been spared, he would have been perhaps the biggest figure in Scientific Medicine of the present generation.

Yours very truly,
(Signed) G. ELLIOT SMITH,
Professor of Anatomy."

Amplified biographical sketches of Dr. Hunter may be found in the December 20th issues of The Lancet of London, and The British Medical Journal.

FRANKLIN H. MARTIN,
Director-General.

Editor of The Journal:

In spite of the fact that diphtheria is absolutely preventable, there were 438 deaths from, and 5516 cases of this disease in Michigan during the first eleven months of 1924. Although toxin-antitoxin and Schick material have been available free of charge for over two years, comparatively few immunizations have been done, and some method whereby all the children of the state can receive protection must be devised without further delay.

The Michigan Department of Health is beginning a diphtheria protection campaign, and we are planning to urge the immunization of children of school, and pre-school age throughout the state. Educational literature, posters, and newspaper articles are being prepared, which, together with toxin-antitoxin will be available without cost. Lecturers will stress diphtheria protection, and our staff will include a field unit who will administer toxin-antitoxin.

We do not wish to interfere with the private practice of any physician, and in localities where the medical profession prefer to handle the matter themselves, toxin-antitoxin will not be given by members of this department. However, I am sure that you will agree with us in believing that the diphtheria situation demands prompt, organized effort both on the part of public health officials, and the medical profession. Therefore an expression of opinion from the members of the St. Joseph County Medical Society is earnestly requested. Do the members of the Society object to the free administration of toxin-antitoxin to the children of St. Joseph county by physicians from the Michigan Department of Health? If your members do object to this work being done by the state health department, will your Society sponsor, and organize local immunization campaigns, to be general and at public expense? In either case we shall, of course, be glad to give any assistance we can.

May I ask you to consider this vitally important matter at once, and may I request your co-operation in our efforts to make diphtheria in Michigan a disease of ancient history?

Yours very truly,
R. M. Olin, M. D.,
Commissioner.

To Diphtheria Patients and Their Relatives:

We are sorry to learn that you have diphtheria, and we know that you do not wish your friends and acquaintances to contract this disease.

Won't you help us make people realize that diphtheria is absolutely preventable? TOXIN-ANTI-TOXIN given at three weekly intervals renders nearly every one incapable of becoming ill with diphtheria.

Please discuss this matter with your physician or the local health department, and as soon as you have

been released from quarantine please try to persuade your friends to protect themselves and their children.

With your assistance diphtheria can be made a disease of ancient history in Michigan.

Yours very truly,
R. M. Olin, M. D.,
Commissioner.

DIPHTHERIA PREVENTION UNIT

Personnel—Lecturer and organizer: Dr. Poole.
Preschool organizer: Miss Nash.
Preventive Clinic: Dr. Rose, Miss Canfield.

Selection of Counties

Counties which it is desired to immunize will be chosen on a basis of their previous diphtheria incidence and mortality.

County medical societies will be circularized first and asked directly whether or not they object to work being done by the unit in the county.

If the physicians do not object, county school commissioners, county co-operating health committees, public health nurses and individual physicians will next be circularized.

Plan of Operation

Dr. Poole will first visit the county. He will perform the following duties:

1. Lectures.
2. Visits to—
Physicians.
School commissioners and superintendents.
Co-operating committee chairman.
Public health nurses.
3. Choice of some one individual who will be responsible for the Prevention Unit work locally.
4. Tentative choice of townships and villages to be immunized.

From this department, posters, pamphlets and permission slips will be sent to each locality chosen. The distributing of this material will be taken care of locally. The local newspaper will be furnished advance stories by the Bureau of Education. Motion picture films will be available for loan.

Miss Nash will visit the county ten days before the Clinic proper. She will verify the arrangements made by Dr. Poole and make sure that the local people who are sponsoring the Unit have made all the necessary arrangements, including the distribution and return of permission slips. She will then make as many house to house calls as possible, urging parents to bring children of pre-school age to the clinic.

The Clinic proper will remain in one county for three weeks, working from Monday until Friday, and making the two necessary return trips to each community the following two weeks. They will finish two more counties before returning to county number one, allowing an interval of six weeks to elapse, when the children in all three counties will be Schick tested. Those found positive will be taken care of locally. To complete three counties, twelve weeks will be necessary.

Nashville, Mich., January 5th, 1925.

To the Editor The Journal:

I wish to call your attention to an error in the last Journal.

In the deceased list I notice the name of Francis Shilling of this place.

Dr. Shilling is not dead, but on the contrary, very much alive. On the 7th of last April he suffered an attack of hemiplegia, from which he is recovering.

Yours very truly,
E. T. Morris, M. D.

Editor of the Journal of The Michigan State Medical Society:

A medical friend of mine has just called my attention to an article in your publication as of January, 1925, giving the name of Francis F. Shilling of Nashville, Mich., as a deceased member.

While Dr. Shilling was stricken with an apoplexy stroke over a year ago and is still confined to his bed, he is gradually showing improvement.

While it is doubtful whether he will ever practice again, I believe it would be a good thing to have the statement corrected that he has actually died.

Yours very truly,
W. V. Bowers.

CAPITAL PUNISHMENT

Editor of The Journal of The Michigan State Medical Society:

Unless my limited acquaintance with history has been misleading, a grave danger confronts society for which legislators, lenient courts which permit miscarriage of justice, and mawkish sentimentalism which condones too much of crime on the score of mental defect, will be responsible.

Time was when the hands of a peasant poacher were cut off if he trapped a rabbit. From this brutal conception of *punishment* for crime, the pendulum has swung to the other extreme, thanks to the sob-squad, to the deluded "optimist" who, through habit expression recites "All's well with the world" as a truth, to the propagandist of crime as disease, to those of convolutionless brains who supply criminals with flowers, and to others who criticize drastic action on the part of the police in the protection of the public.

No relief need be expected from the results of such emotionalism until the individual members of the above groups find (as they will) their own lives and property in jeopardy. So long as banditry is largely confined to banks, mail cars and gas stations, and hold-ups are mainly of those ostentatiously displaying wealth, the poor "sick man" and irresponsible defective will find safe shelter behind the skirts of the soulful, and in preaching of crime as disease and the criminal as a suffering and pity-inspiring personality will continue.

However, banditry bids fair to become general and not confined to those easy objects. The exemplars of Good-Will Limited (to criminals) will also suffer and find themselves victimized by their meticulously coddled proteges. What then will happen to "uplift"? Revulsion of feeling may carry this so-called "civilization" back to the medieval, barbaric, when off will go the hands of the petty thief and fagots, not flowers, surround the "slick man." "Impossible!" you exclaim. Not so. Given sufficient provocation and reaction will inevitably follow. "Superiority" and "enlightenment" are mere words.

The remedy? Speeding up the wheels of justice; swift, common-sense application of effective law; elimination of technicalities in judicial procedure; extermination of the deliberate murderer. Personally, I favor hanging, lethal gas, or electrocution for the bandit who, flourishing a gun, threatens robbery. At least, I would leave such sentence optional with the court. We cannot spare one honorable bank employee, one conscientious taxi-cab driver, one fair-minded policeman. The lives of a score of highwaymen weighed in the balance against one of these well-intentioned citizens, would be found wanting. Remove from earth the deliberate murderer as well as the potential murderer who practices the stick-em-up game. Dispose of them relentlessly as vermin. They cumber the ground and are a constant moral and financial liability.

The example of Great Britain and Canada that execute brazen criminals expeditiously and have as a

consequence an infinitely small fraction of crime as compared with the United States, is plain and convincing.

My contention is that high crime is not adequately met in Michigan. Quick extermination of deliberate murderers would solve the problem. Eliminate these, not for the sake of revenge, not as examples, not as a deterrent necessarily, but for the salvage of the tattered fragments of good order. Expediency has been lulled to sleep by the exponents of slushy sentimentality. Much stress is very justly and properly laid upon training the young to righteous living, but no organized and determined effort is made to save for coming generations the framework of a social structure now being wrecked by adolescent and mature criminals.

It is my sincere conviction that continued extenuation on one score and another will, when crime becomes acute and intolerable to dreaming exponents of sweetness and light, result in a whirlwind rage of persecution and injustice. Undisciplined emotionalism unaccompanied by good judgment, will carry them far in such direction.

The biennial agitation of the subject of restoring so-called "capital punishment" is now on. The profession of medicine has the clear and unmistakable duty to assist in crystalizing public sentiment in favor of such legislation—to the end that the proposed referendum may be fruitful of good to a vice-and-crime-burdened state.

Yours truly,
C. B. Burr.

Flint, Mich., January 14, 1925.

January 16th, 1925.

Postscript to my communication of January 14th.

To illustrate how shockingly inured and adjusted the public has become to the present carnival of crime, witness the editorial in this morning's Free Press, calling attention to the outgiving of a Justice of the Supreme Court of Massachusetts to the effect that murder having "become an everyday occurrence, the public would be better off if it was treated like an every-day happening." Philosophically, as a tactful man accepts a badly cooked dinner without complaint?

Yours truly,
C. B. Burr.

AS "AN EVERY DAY HAPPENING"

In the course of a discussion in the Independent of the way in which he thinks homicide cases ought to be handled by the newspapers, Judge William Cushing Wait of the Massachusetts Supreme Judicial Court says that since murder has become an every day occurrence, the public would be better off "if it were treated like an every day happening." In other words, the judge suggests that because it is prevalent, murder ought to be considered incidental, a matter of no particular importance, and something which is of small interest to society. His view seems to be that the greater the evil, the less its significance.

According to this reasoning, if an epidemic of virulent disease invades a community, the newspapers ought to grow more and more indifferent, the more uncontrolled its ravages become; and as the number of traffic casualties increase, the less the people should be told about them and warned of the peril in which they live. Carrying the judge's method of reasoning into the political world, the more common corruption becomes among public officials, the less the recorders of conditions and events should trouble themselves to recite the facts to the voters of the nation. If sufficiently common, bribery should be treated as "an every day happening," and ignored.

It seems to us that Judge Wait's theory is rather

absurd. It is true, he attempts to justify it in its immediate application by insisting that no one need fear that the courts will treat murder lightly "or will fail to hasten in every proper way, the disposition of indictments." But unfortunately, human experience does not indicate that the courts can be universally trusted to do anything of the sort if the public does not maintain a pretty lively scrutiny of their doings. Beside this, the fight against the plague of murder in America by no means depends exclusively on the courts. The peace agencies of various sorts have a primary and exceedingly vital part in the effort to keep down crime and apprehend criminals, and there is nothing which keeps a police force on its toes as efficaciously as does a knowledge that it is being watched, and that the public is going to know when it does well or when it does badly.

State News Notes

COLLECTIONS

Physicians' Bills and Hospital Accounts collected anywhere in Michigan. H. C. VanAken, Lawyer, 309 Post Building, Battle Creek, Michigan. Reference any Bank in Battle Creek.

NURSES' private home, invites convalescents and invalids; best of care, fine location. R. Rs. N. Y. C. and Interurban; best of references given. For particulars write Bessie Bileth, 566 Ely Street, Allegan, Mich.

WANTED: Salaried Appointments for Class A Physicians in all branches of the Medical Profession. Let us put you in touch with the best man for your opening. Our nation-wide connections enable us to give superior service. Aznoe's National Physicians' Exchange, 30 North Michigan, Chicago. Established 1896. Member The Chicago Association of Commerce.

A PRACTICAL course in Standardized Physiotherapy, under auspices of Biophysical Research Dept. of Victor X-Ray Corporation, is now available to physicians. Offers a highly practical knowledge of all the fundamental principles that go to make up the standards of modern scientific physiotherapeutic work. Course requires one week's time. For further information apply to J. F. Wainwright, Registrar, 236 So. Robey St., Chicago, Ill.

FOR SALE—Attention, medical graduate, doctor or surgeon. The surgical instruments, medicines, operating and office furniture of the late Dr. F. J. Lee may be purchased complete at a very reasonable figure. S. George Graves, special administrator, Young & Chaffee Furn. Co., Grand Rapids, Michigan.

UNUSUAL OPPORTUNITY for Physician—Lively town of 1,500 has but one doctor, nearby towns of same size support four to five. Doctor wishing to step into first class practice, investigate this. Good office available. For full particulars write, N. A. Weiss, Secretary Exchange Club, Evart, Michigan.

WAYNE COUNTY MEDICAL SOCIETY

The Society has been particularly fortunate in that 1924-25 has shown a decided enthusiasm on the part of its members towards the lecture schedule. The attendance has been more than encouraging, the lecturers more than interesting, and the ensuing discussions fully taken part in.

On Monday evening, February 9th, at 8:30 p. m., Dr. A. J. Pacini of Chicago, is to address the mem-

bers on Diatherma and Ultra Violet Light. Truly an anticipated pleasure.

Dr. Pacini needs no introduction to the medical and allied professions of Wayne county and Michigan. He is a young man with a veteran's record. Born in New York city in 1890, he has won the Sternberg Medal of the Army Medical School, the American X-ray Society Leonard Prize; he is a chemist, and has contributed much to scientific literature on such subjects as Ultra Violet Light and X-ray Physics and Treatment. During the World War he was in the Surgeon's General's office and had charge of the X-ray department.

Dr. Pacini has a wide knowledge of French, German, Italian, Spanish and English literature; he is a fascinating and witty speaker (in more than one language), he is a master of his chosen specialties, and altogether the Society can congratulate itself on having the privilege of securing a man of his caliber to address the members.

It need hardly be urged that the profession avail itself of this opportunity to hear Dr. Pacini. Members of other scientific societies are already evincing an interest in the forthcoming lecture, and it gives every promise of becoming the event of the current season.

The Annual Clinic Week of the Alumni Association of the Detroit College of Medicine and Surgery will take place June 15-19, 1925. The Commencement exercises take place on the evening of Thursday, June 18th.

The committee is making a special effort to obtain a strong program for the clinics, and has already had several acceptances from visiting men, who will give the noon clinics. Among those who have been invited are:

Dr. William E. Gallie of Toronto, in Surgery.
Roger S. Morris of Cincinnati, in Medicine.
Dr. J. B. Deaver of Philadelphia, in Surgery.
Dr. J. A. Capps of Chicago, in Medicine.
Dr. J. Bentley Squier of New York, in Urology.
Dr. Deaver will also give the Commencement address at the graduating exercises.

The committee is also working up several other special features, which they believe will make this year's Alumni week an unusually interesting and profitable one.

The tentative arrangement of the program is as follows:

Monday, June 15th, at Harper Hospital.

9-11 a. m.—Clinics.

11-1 p. m.—Dr. Jos. A. Capps, Chicago, Medicine.

8 p. m.—Meeting at Wayne County Medical Society.

Tuesday, June 16th, at Grace Hospital.

9-11 a. m.—Clinics.

8 p. m.—Class Reunions. All classes ending in "0" and "5", let your secretary know you're coming.

Wednesday, June 17th, at Providence Hospital.

9-11 a. m.—Clinics.

11-1 p. m.—Dr. J. B. Squier, New York, Urology.

2-4 p. m.—Clinics at the College.

6 p. m.—Subscription dinner and Annual Meeting of the Alumni Association.

Thursday, June 18th, at St. Mary's Hospital.

9-11 a. m.—Clinics.

11-1 p. m.—Dr. Roger S. Morris, Cincinnati, Medicine.

2-4 p. m.—Clinics at Herman Kiefer Hospital.

8 p. m.—Graduation exercises. Address by Dr. Deaver.

Friday, June 19th, at Receiving Hospital.

9-11 a. m.—Clinics.

11-1 p. m.—Dr. John B. Deaver, Philadelphia, Surgery.

8 p. m.—Golf tournament.

After six years of service on the Muskegon City Council, Dr. Geo. L. LeFevre was presented with a desk set on his retirement from office on January 3rd.

Dr. W. T. Dodge of Big Rapids, is spending the winter in Florida.

The Academy of Surgery of Detroit held their first meeting of the year Friday evening, January 9th, at the Jefferson Clinic and Diagnostic Hospital.

The address of the evening was given by Dr. F. N. G. Starr of Toronto on "Appendicitis—So Called." The paper was discussed by Doctors Max Ballin, H. K. Shawan, Paul Eisen and Walter Hackett. Dinner was served at 6:30 p. m. Fifty-seven were present.

Dr. G. Van Amber Brown of Detroit, who has been ill for several weeks with facial erysipelas, has fully recovered again and is attending to his professional duties.

The monthly Practitioners' Clinic was held at the University Hospital on January 13th and was well attended. The principal problems presented were those of carcinoma of the digestive tract.

Dr. Preston M. Hickey of the Roentgenology Department of Ann Arbor, and Dr. Frank D. Dickson of Kansas City, Mo., gave a combined X-ray and Orthopedic Clinic at the meeting of the American Radiological Society at Kansas City last month. At this meeting Dr. Hickey was presented with a gold medal in recognition of his contributions to the science of Roentgenology.

Dr. Robert Gesell of the Department of Physiology of the University Medical School, read a paper entitled, "Experimental Data Relating to the Chemical Regulation of Respiration" before the Federation of American Societies for Experimental Biology, during the recent meeting in Washington, D. C.

Doctors E. E. Nelson and A. G. Young of the Department of Pharmacology, of the University of Michigan, attended the meeting of the Federation of American Biological Societies in Washington last month.

During the past month Dr. John Sundwall, director of the Department of Hygiene and Public Health of the University of Michigan, delivered the following lectures: "The Future Trend of Public Health Activities," before the Genesee County Medical Society at Flint; "Some Important Aspects of Public Health Work" before the County Medical Society at St. Johns; "The Critical Age of Forty" before the Jackson County Medical Society. Dr. Sundwall also presided at the Friday afternoon session of the Conference on Public Health of the Michigan Department of Health at Lansing.

Dr. Sinai of the Department of Hygiene and Public Health, University of Michigan, lectured on "Community Health Problems" at Berkeley, Mich., and at Galien, Mich., last month.

Dr. Harriet Cutler of Korea, graduate of the University of Michigan Medical Class of 1883, spent a few days in the Pathological Laboratory during the last week of December.

The Pathology Department of the University of Michigan entertained Dr. and Mrs. Dick of Chicago

during the past month. Dr. Dick, in his lecture on "Scarlet Fever," described the original investigations carried on by himself and Mrs. Dick in isolating a hemolytic streptococcus as the cause of scarlet fever with positive demonstration of its toxine and antitoxine production and the practical application of an immune reaction, the Dick test.

The Department of Pathology, University of Michigan, made the following contributions to the meeting of the American Societies for Experimental Pathology: Paper on "The Experimental Effects of Irradiation on the Cells of Lymphangiomatous Nevi" by Dr. A. S. Warthin; Dr. Ruth Wanstrom read a paper on the study of "Rabbit Spirochaetosis"; a paper by Dr. C. V. Weller on "Experimental Lead Meningoencephalitis" was read December 29th. On December 30th, Dr. Weller presented a paper on the "Spinal Fluid in Cases of Lead Poisoning" before the National Commission for Mental Hygiene and the Study of Nervous Diseases in New York city.

Dr. A. S. Warthin of the Department of Pathology, University of Michigan, attended the meeting of the Board of Regents of the College of Physicians in Philadelphia, December 27th. He also presided as president of the American Association for Experimental Pathology at the meeting in Washington, December 29th to 31st inclusive, and as chairman of the Federation of the Societies of Experimental Biology during the same time.

Dean Hugh Cabot of the medical school spoke on "The Historical Development of Operations for Stone in the Bladder" at the West Amphitheater of the Medical building, giving the first lecture on a course under the auspices of Alpha Omega Alpha, national honorary medical fraternity. This lecture course was instituted by Alpha Omega Alpha to meet a desire of the students in the medical school to learn something about medical history. Under this system a member of the medical faculty gives a lecture each month, in the West Amphitheater. Professors A. S. Warthin, Frederick A. Collier, G. Carl Huber and Albert M. Barrett, all of the Medical School, have promised to speak, and negotiations are under way to obtain several other lecturers.

Dr. J. H. Slattery of Bay City, is spending the winter in Switzerland.

Born to Dr. M. R. Slattery and wife, Bay City, a daughter, on January 4th.

The new Nurses' Home of Hurley Hospital is rapidly nearing completion and will be ready for occupancy about March 1st, 1925. It is one of the finest, if not the finest nurses' home in the state.

Dr. Wright, formerly interne at Hurley Hospital, has opened offices at 12th and Detroit streets for the general practice of medicine.

Doctors Robinson and Smeseth, '24, University of Michigan Medical school, are internes at Hurley Hospital.

Dr. Curhan, '24, Tufts Medical School, Boston, Mass., is an interne at Hurley Hospital.

Doctors Nagle and Curtin of the Flint Board of Health were recently made members of the Genesee County Medical Society.

OUR SOCIETY BUSINESS AND ACTIVITIES

HARVEY GEORGE SMITH

EXECUTIVE SECRETARY

NOTE: This Department will each month contain a discussion and report of our Society work and planned activities. Your interest and correspondence as to your problems is solicited.

INGHAM COUNTY MEDICAL SOCIETY INITIATES PROGRAM FOR 1925

The Ingham County Medical Society is out for accomplishing big things for the medical profession within its territory. On a two day margin of notification sixty-five members out of a membership of ninety-nine were present at a noon-day luncheon. The Secretary learned that members of the State Medical Society were or could be in the county and immediately got busy. The officers were consulted and arrangements were made within a few hours for a meeting. The following snappy notice went out to the membership in the next morning mail. Here is the way it was written:

"The Ingham County Medical Society will meet for luncheon Friday noon, January 9th, 1925, in the Hotel Downey grill.

"Mr. Harvey George Smith of Grand Rapids, who is the newly appointed Field Secretary for the State Medical Society, and Dr. Warnshuis, the General Secretary of the State Medical Society, will be with us.

"A large attendance is desired, as these men are anxious to meet our members and also have some interesting information for us.

"Let's let them know that Ingham Society is a live one, and every one be present.

"Horace L. French, Secretary."

The spirit of this notice prevailed throughout the meeting. Luncheon was served promptly and the program was conducted in like manner. The meeting adjourned according to schedule, at one-fifty, permitting the physicians to all be back in their offices with the exception of six loyal doctors who had driven in from near-by towns.

The president, with pointed remarks opened the meeting, conducted the necessary business and then called on the speaker present. (Many regrets were expressed that Dr. Warnshuis had not been able to arrange his time so as to be present.) Dr. Davey, who was not on the program, was asked to give a report on what had been accomplished by the State Legislative Committee to date. And the result of the meeting was this: the chairman of the program committee asked the membership to come forward with suggestions as to what it wanted for

the 1925 program. The Secretary said we are ready to do our best, but we need every member behind this Society for action. And after the meeting the president and the secretary said that the Society had plans in mind for the program which included a monthly luncheon meeting, with live singing and talks, social meetings, and a number of programs consisting in talks on sociology, psychology, finance and other subjects all of which were as vital in the life of the community.

This sounds like progress and is taking a new step in making a County Medical Society effective for the profession, by service for the membership and indirectly for the community. And all through the period while the physicians were gathering for the meeting, during the meeting and after the meeting an atmosphere of action, of friendship, of life was markedly present. What County will be next to take on this new program and enter the field of organized activity?

ROLL YOUR PILLS INTO DYNAMOS

The program of the County Medical Society is the mainspring of the organization. The program is what the Society actually sees in relief. It is the representation of thought and energy and interest and enthusiasm of the membership through the various offices and committees who have been delegated to the accomplishments of such tasks. It presents to the membership in regular meetings from week to week, from month to month and from year to year, a story of what the profession of each Society has determined that it should represent. It contains no more nor no less than the membership, what the officers and the committees have been willing to put into the Society for the advancement of the science of medicine. It is in fact the culmination of all effort expressed in definite form.

But what are we to understand by program? Is it the meeting together of the membership at regular or irregular intervals to listen to lectures and discussions or various topics by prominent speakers of the local society or a neighboring society? Is it

the meeting together for dinner or luncheon and listening again to some speaker? Is it the discussion of a local problem on the relationship of physicians among themselves? Is this what we are to understand by the word program? Or, is it the scientific program as represented by lectures, discussions, clinics, etc., and in addition a thoughtful development through careful study of the problems and all of the problems that confront the medical profession in each and every community. Are not the problems of the relationship of the profession to the laity and vice versa, the problem of giving to the laity a thorough understanding of what the science of medicine represents, the problem that involves the whole community from a social and educational viewpoint and the problem of establishing the authority of scientific medicine are not all these and many more actually the component parts of the real program that any society must undertake and solve? And such a program will for the general good of the physicians include lectures not only on the scientific subjects for the advancement of each member of the societies, but in addition lectures on psychology, sociology, finance education history, and many others. Then the program will be broad, will have depth and will at all times adjust and bring understanding and progress to the science of medicine in each and every community and in each society.

By including in the word program this broad understanding and by bringing and giving to each society the hearty, earnest and thoughtful effort of each member the relief map of each society will be an attainment of merit when the year 1925 comes to a close.

What can each member do individually to the support of such a program? First of all, give your unqualified support, even though you may not agree with all the various parts and details. Give of your time, thought, energy and wisdom for the interest you yourself have in your profession, for your fellow practitioner and for establishing a so-called solid front in your own profession and science. Give these not only for your own profession, but in service to your community, your neighbor, your friends, and your fellow workers in the great profession of humanity itself. Roll your pills into dynamos of human service.

Friendship is the practical foundation upon which are, or should, be built all Society activities. When the human race first made a definite step in advance ages ago, it did so when it learned to gather together in groups for the purpose of learning how to work in harmony.

The group is the first record we have of accomplishments of any kind, in war, in society, in peace and in religion. The group was the point of contact for each member. It was the place where he made his contribution by action, by thought and by deed. And likewise, it was the place where he received information, learning, wisdom and the understanding of how to work with his fellow member.

There is a woeful lack in the world today of friendship. We have wives and husbands, sisters and brothers; we have partners, associates, colleagues, mentors and advisors, educators, governors and statesmen, but there is a dearth of friends.

Friendship is that quality which takes all, gives all and endures all. It is more priceless than love, more enduring than most of our human qualities. A good friend is the *sine qua non* of all good qualities in mankind. Love is a passion, a flare, a flame. Friendship is a gentle warmth, a glow, a guiding light. It is the expression of understanding. If there was more friendship in the home there would be less divorce. If there was more friendship in business, in industry and in all our economic and political relations, there would be no strikes, no distressing upheavals and we would pay out less in taxes. If there existed more friendships among nations there would be less war. Diplomacy is a false synonym for friendship. Nations trained in friendship need no diplomacy.

Likewise, friendship is necessary to the medical profession. When your patient is "your friend," you have attained two distinctions—that of confidence and attraction. When you have the friendship of your colleagues you make them partners in your profession. The qualities of friendship are universal. They are the same all over, in all parts of the world and in all human relationships.

One of the principal aims of the Michigan State Medical Society is to cultivate friendships. This cultivation is the natural result of contact, of the rubbing of shoulders and calling each other by their first and not their adopted names. There is no miracle in medicine that requires its practitioners to be strangers. In fact, quite to the contrary, the profession requires a contact that in itself is a culture for friendship.

Because your neighboring doctor may know more or less than you do, is no reason why you cannot be friends. The chances are that each of you may have what the other fellow needs. Friendship has been the base of all human progress. Let it be the same in your profession.

County Society News

WAYNE COUNTY

To detail the activities of the Wayne County Medical Society for 1924 would require far more space than can be given in the bounds of this communication; but mention might be made of a few general things that have marked the year in its passing.

Under the capable leadership of Dr. Frank A. Kelly in the spring, and of Dr. Wm. J. Stapleton, Jr., in the past fall, the weekly Monday night meetings have swung along, leaving much of practical and scientific profit in their wake. Individual mention of speakers in evenings of uniform excellence is impossible, but sufficeth to say that the range of medicine and its allied branches was covered regionally from "Head-aches," discussed by Dr. Hugh Patrick of Chicago, to the X-ray study of pelvic pathology by Dr. Reuben Petersen of the University of Michigan; and geographically, the speakers listed from Dr. Roland E. Skeel of Los Angeles, to Doctors Heyd and MacNeal of the New York post graduate school, the latter having delivered the third series of lectures of the Beaumont Foundation on "Physiological, Pathological and Clinical Problems of the Liver." We were also fortunate in the visit of two distinguished foreigners, Professor A. Biedl of Prague, and Professor Oskar Frankl of Vienna. The varying attendance at these meetings ranged from two hundred to five hundred, the capacity of our auditorium, which was taxed at most of the meetings. In addition to clinical evenings, a number of highly pleasurable affairs were arranged by the entertainment committee with the primary end in view of furthering good fellowship among the members.

The excellent work of the cancer committee was particularly concentrated on "Cancer Week" from February 17 to 21, 1924, during which period open house was held at all hospitals for free examinations of patients. Eleven hundred persons were surveyed and forty-two proven and previously undiscovered cancers were diagnosed. In addition to this a series of radio talks and well attended public lectures by Dr. A. J. Ochsner of Chicago served to further disseminate the popular knowledge of cancer among the laity and pamphlets relative to the subject were distributed by mail to every member of the Society.

The Public Education Committee, now serving as an integral part of the State Joint Committee, reached, through the medium of seventy-six popular lectures on medical subjects, in Wayne County a total of forty-seven thousand with six hundred and twenty average attendance per lecture.

The weekly Bulletin, under the able editorship of Doctors W. G. Martin and Wm. S. Reveno, has taken on a new form and augmented size and with it an increased popularity and scope of usefulness.

Although there was no concerted membership drive, eighty-seven new members were enrolled, bringing our total to thirteen hundred twenty-eight, the fourth largest of any local medical society in the world.

Legislative activities consisted primarily in the definite stand of the Society taken against the Abrams' method and Spector-Chrome Therapy, making indulgence in either of these fads incompatible with membership.

Owing to the plans for the probable removal of the home of the Society to another site it was thought wise to accept the invitation of the city to house our volumes in a branch of the Detroit Public Library, to be known as the Medical Science Department, with the care and furtherance of its upkeep to be left in their hands. This move has proven to be justified, as

the library has been well handled and constantly kept up to date by the addition of the latest valuable contributions to medical literature.

In the belief that the Medical Society of Wayne County has fulfilled to the best of its ability its obligation to the lay and medical community, this report is respectfully submitted.

Very truly yours,

Richard M. McKean.

GENESEE COUNTY

Genesee County Medical Society met at Hurley Hospital, June 16th, 1924.

Speaker, Dr. John O. Polak, Professor of Obstetrics and Gynecology, Long Island College Hospital, Brooklyn, N. Y. His subject was: "The Relationship of Obstetrics to Gynecological Problems."

Genesee County Medical Society met for noon luncheon at Hotel Dresden, Flint, Michigan, September 17th, 1924.

Speaker, Dr. Norman Miller, Assistant Professor of Obstetrics and Gynecology, University of Michigan Medical School. His subject was, "Cranial and Intra-Cranial Injuries to the New Born."

Genesee County Medical Society met for noon luncheon at Hotel Dresden, Flint, Mich., October 1st, 1924.

Speaker, Mr. J. Basil Hume, F. R. C. S., London, England. His subject was "Gall Stones."

Genesee County Medical Society met for noon luncheon at Hotel Dresden, Flint, Mich., October 15th, 1924.

Speaker, Dr. George R. Hermann, Instructor in Medicine, University of Michigan Medical School. His subject was, "The Bedside Treatment of Heart Disease."

Genesee County Medical Society met for noon luncheon at Hotel Dresden. This was the annual meeting and the election of officers of the Society took place for the year 1924-1925, with the result as follows:

President, A. A. Patterson.

Vice-President, F. A. Reeder.

Secretary, G. J. Curry.

Treasurer, W. W. Stephenson.

Delegates: H. Stewart, H. Cook, C. Moll.

Alternates: M. S. Knapp, J. G. R. Manwaring, J. Benson.

Medico-Legal Officer, C. H. O'Neil.

New Member of Board of Directors, W. Winchester.

The speaker was Dr. Theophile Klingman, Department of Neurology, St. Joseph's Mercy Hospital, Ann Arbor, Michigan. His subject was, "Neurological Significance of Early Diagnosis of Pernicious Anemia."

Genesee County Medical Society met for noon luncheon at Hotel Dresden, November 12, 1924.

The speaker was Dr. J. Sundwall, Professor of Hygiene and Public Health, University of Michigan Medical School, and his subject was, "The Trend of Preventive Medicine."

Genesee County Medical Society met for noon luncheon at Hotel Dresden, November 26th, 1924.

Speaker, Dr. Hadley, Assistant Professor of Bacteriology, University of Michigan Medical School. His subject was, "The Bacteriophage."

Genesee County Medical Society met for noon luncheon, December 12th, 1924, at Hotel Dresden.

Speaker, Dr. George Youmans, Instructor in Medical Department, University of Michigan Medical school. His subject was, "Achyilia Gastrica."

Genesee County Medical Society met for noon luncheon at Hotel Dresden, January 7th, 1925.

Speaker, Dr. J. G. R. Manwaring, Flint, Mich. His subject was, "European Surgery."

HOUGHTON COUNTY

Hancock, Mich., January 7th, 1925.

The Houghton County Medical Society held its regular monthly meeting at the Miscowaubik Club, Calumet, at 8:30 p. m., with 13 members present. The matter of increasing the dues, owing to the fact that the state dues have been increased to ten dollars, was taken up. A motion by Dr. Bourland, seconded by Dr. Roche that the dues be \$15.00, was passed.

The first number on the program was a paper and presentation of a case of Coronary Occlusion, by Dr. P. D. Bourland, chief of the Calumet & Hecla Hospital. The next number was a paper on "The Treatment of Asthma by the Removal of its Pathology," by Dr. Frank Walters of Houghton. This paper was the result of Dr. Walters' personal experience with bronchial asthma and treatment of same by physiotherapy and X-ray treatment. Both of these papers were fully discussed by those present, and both were interesting and very instructive papers. Dr. Bourland also presented a case of exfoliation of the skin of almost the entire body, showing specimens of same.

The annual election of officers was next in order, and the following were the results:

President, Dr. I. D. Stern, Houghton.

Vice-President, Dr. A. C. Roche, Calumet.

Secretary-Treasurer, Dr. G. C. Stewart, Hancock.

Censor for three years, Dr. A. D. Aldrich, Houghton.

Delegate to State Convention, Dr. C. E. Rowe, Hubbell.

Alternate Delegate, Dr. J. B. Quick, Calumet.

The applications for membership of Dr. E. A. Bicknell of the C. & H. staff, and Dr. W. H. Ellis of the Quincy staff, were received, Dr. Ellis being transferred from the Marquette-Alger County Society.

The report of the Secretary-Treasurer for the year 1924 shows the total number of meetings, 12; total attendance, 181, with average attendance of 15 per meeting; 2 members have been removed by death during the past year; 1 member removed from district; total of paid up members, 39; total receipts, \$576.95; total disbursements, \$480.80; balance in treasury, \$96.15.

The Society then adjourned to lunch.

P. S.—It is the intention of the Secretary of the Houghton County Medical Society to co-operate in every way possible to make the year 1925 a successful one. I would appreciate it very much if you would furnish me with a list of available speakers for some of our meetings. Any suggestions or help which you or the Executive-Secretary see fit to give will be very much appreciated.

I shall send Dr. Walters' paper to you for publication in The Journal, as I consider it a very well written and instructive paper.

Yours very truly,

G. C. Stewart, M. D.,

Secretary.

MECOSTA COUNTY

The annual meeting of the Mecosta County Medical Society took place Friday evening, December 19th, 1924, at Big Rapids. In spite of the severe turn taken by the weather, the attendance was excellent and the outside speakers came. The company was entertained by Dr. J. B. Campbell and Dr. Glenn Grieve, hosts at a four-score feast served at Burch's cafe.

The officers elected for the coming year are all new except Donald MacIntyre, who holds over. Dr. G. H. Yeo was chosen president; Dr. B. L. Franklin of Remus, first vice-president; Dr. M. L. Teeple of Morley, second vice-president; Dr. Donald MacIntyre, secretary-treasurer; Dr. L. E. Kelsey of Lakeview was named delegate to the State Medical Society meeting, with Dr. J. L. Burkart as alternate. Dr. G. H. Lynch was selected for medico-legal advisor.

George Harvey Smith of Grand Rapids came up. He is Executive Secretary of the State Medical Society. Mr. Smith talked on the proposed activities of the State Medical Association for 1925. Dr. F. Courrier, also from Grand Rapids, spoke (with illustrations) on reflexes, deep and superficial. Dr. W. Northrup, a third man from Grand Rapids, gave an illustrated talk on the heart. Dr. C. F. Pryor, one of the dentists of the city, who were guests on this occasion, contributed the review of a case of naomi.

BARRY COUNTY

At the December meeting of the Barry County Medical Society the following officers were elected:

Dr. C. P. Lathrop, Hastings, President.

Dr. R. W. Griswold, Freeport, Vice-President.

Dr. A. W. Woodburne, Hastings, Secretary-Treasurer.

Dr. E. T. Morris, Nashville, Delegate to State Meeting.

Dr. C. K. Brown, Nashville, Alternate.

Dr. B. C. Swift, Middleville, Medico-Legal Advisor.

In place of holding a meeting here in January, our Society was invited to visit the Sunshine T. B. Sanitarium at Grand Rapids on January 9th. Nine of our fellows went up and Dr. Nesbitt gave us a splendid clinic from 3 to 6 p. m., followed by a dinner, and those who went felt that it was a unique and very profitable way to hold a Medical Society Meeting for a change.

Yours most sincerely,

A. W. Woodburne.

JACKSON COUNTY

The year of 1924 has been one of the most successful years the Jackson County Medical Society has ever enjoyed. There was a total of 72 who paid their dues, this being the largest mailing list we have ever had. The meetings were well attended and the programs were excellent. The spring and fall clinics were decidedly successful from the standpoint of the patients themselves and the doctors who attended.

A brief resume of the activities of the Society follows:

January 26, 1924—Pig hocks and sauerkraut dinner at Hayes Wheel Club, Round Lake. This was a social get-together meeting and no scientific program or business was transacted.

February 15, 1924—Dr. A. J. Ochsner, Chicago, Ill., President of American College of Surgeons. Subject, "Osteomyelitis." Physicians of Washtenaw,

Ingham, Calhoun and Kalamazoo Counties were invited to this meeting.

March 20, 1924—Dr. Fred Collier, Assistant Professor of Surgery, University of Michigan. Subject, "Diseases of Thyroid Gland." Dr. Deacon, Director of Bureau of Vital Statistics. Subject, "Result of Goiter Surgery in Michigan."

April 23, 1924—Dr. Max Burnell, Flint, Mich. Subject, "Intracranial Injury at Childbirth."

May 27, 1924—Spring Clinic Day—Dr. Wm. Omstead, Assistant Professor of Medicine, Washington University. Director of Metabolism Unit, Barnes Hospital, St. Louis, Mo.

Program as follows:

8:30-10 a. m.—Ward rounds Foote Hospital.

10:30-12 a. m.—Ward rounds Mercy Hospital.

2:00 p. m.—Clinic at Foote Hospital. "Diabetes and Diseases of the Kidney."

8:00 p. m.—Foote Hospital.

Paper and demonstration of food values. This was very successful, with a large attendance and plenty of good clinic material.

June 26, 1924—Annual picnic at Clark's Lake.

October 16, 1924—Dr. Max Peet, University of Michigan. Subject, "Neurological Surgery."

November 18-19, 1924—Fall Clinic. Program as follows:

November 18th, at Foote Hospital.

9 a. m.—Dr. Plinn F. Morse of Detroit Clinic, In Internal Medicine.

1:30 p. m.—Dr. A. L. Jacoby of Detroit, Clinic in Neurology.

3:30 p. m.—Dr. Udo J. Wile of Ann Arbor, Clinic in Dermatology.

November 19th, at Mercy Hospital.

9 a. m.—Dr. Howard Cummings of Ann Arbor, Clinic in Gynecology.

2 p. m.—Dr. Rockwell Kempton of Saginaw, Clinic in Pediatrics.

6 p. m.—Dinner—stag—Guild House.

7 p. m.—Dr. Carl Eberbach of Ann Arbor, "Infections of the Kidney."

December 17, 1924—Election of officers and transaction of general business at 4 p. m.

7 p. m.—Dinner, dance at Jackson City Club. Speaker, Dr. John Sundwall, Professor of Hygiene of University of Michigan. Subject, "The Critical Age of 40."

Officers for 1925:

Dr. J. C. Hicks, President.

Dr. Harold Hurley, Vice-President.

Dr. L. J. Harris, Treasurer.

Dr. D. F. Kudner, Secretary.

Dr. D. F. Kudner,
Secretary.

CALHOUN COUNTY

The forty-eighth annual meeting of the Calhoun County Medical Society was called to order by President Haynes in the Bridge room of the Post Tavern at 5 p. m., December 2nd, 1924.

Dr. W. H. Haughey moved that the minutes of the preceding meeting be approved as printed in the Bulletin. Seconded by Dr. Gorsline and carried.

Dr. Gorsline called attention to an error in addition in the Treasurer's report. Total receipts should have been read \$1,287.00 instead of \$1,297.00, and cash

on hand should have read \$533.69 instead of \$543.69. Dr. Gorsline moved that the report of the Secretary-Treasurer be approved as corrected. Seconded and carried.

Nominations were called for the office of president, and Dr. Wilfrid Haughey placed in nomination, Dr. A. F. Kingsley. There being no further nominations, Dr. Gorsline moved that the nominations be closed, the rules be suspended and the Secretary cast the unanimous ballot of the Society for Dr. Kingsley for president. Supported and carried unanimously. The Secretary cast 20 ballots and Dr. Kingsley was declared elected president.

Nominations were called for the office of Vice-President. Dr. Gesner nominated Dr. L. S. Hodges of Tekonsha, and Dr. Gallagher nominated Dr. James Elliot. There being no further nominations Doctors Church and Gesner were appointed tellers. The tellers reported 24 ballots cast, with 17 ballots for Dr. Elliott. Dr. Elliot was declared elected Vice-President.

Nominations were called for the office of Secretary-Treasurer. Dr. A. F. Kingsley nominated Dr. T. L. Squier. Dr. George Hafford moved that the nominations be closed, the rules suspended and that the President cast the unanimous ballot of the Society for Dr. Squier for Secretary-Treasurer. Supported and carried. The President cast 24 ballots, and declared Dr. Squier elected Secretary-Treasurer.

Nominations were now in order for Delegates to the State Society. Dr. W. H. Haughey nominated Doctors Gorsline and George Hafford. Supported by Dr. Sleight. Dr. Kingsley moved that the nominations be closed, the rules suspended and the Secretary cast the unanimous vote of the Society for Doctors Gorsline and Hafford. The Secretary cast 24 ballots, and declared Doctors Gorsline and Hafford elected Delegates to the State Society.

Dr. Gesner nominated Dr. Wilfrid Haughey and Dr. S. K. Church Alternate Delegates. Dr. Gesner moved that the nominations be closed, the rules suspended and the Secretary instructed to cast the unanimous ballot of the Society for Doctors Wilfrid Haughey and Church. Supported and carried. The Secretary cast 24 ballots and declared Doctors Wilfrid Haughey and Church elected Alternate Delegates.

Dr. Haynes addressed the Society, following which Dr. Kingsley took the chair. Dr. W. H. Haughey moved that Article 1, Section 1, of the Constitution be amended to read:

Applications for membership shall be made in writing to the Secretary of the Society, and shall be submitted by him to the Board of Directors thereof, who shall investigate the eligibility of each applicant and shall report their findings to the Society. All elections for membership shall be by open ballot, or by a yea or nay vote, and a four-fifths majority of those present shall be necessary for election. Each applicant, when elected, shall sign the By-Laws and agree to conform to the same, and to the Code of Ethics of the American Medical Association, and shall also pay his dues in advance at the rate of \$15.00 per year, \$10.00 of which shall be dues to the Michigan State Medical Society, for the then fiscal year, before he shall be entitled to the privileges of the Society."

The amendment was presented at the preceding meeting and published in the Bulletin. Supported by Dr. Cooper and unanimously carried.

The Secretary read the following bills: Phoenix Printing Co., \$16.00; Dr. Squier, mailing Bulletin, \$1.51. The bills having been approved by the members of the Board of Directors, Dr. Rosenfeld moved that the bills be paid. Supported by Dr. Kolvoord and carried.

Applications for membership were given the second reading from the following: Frank E. Leslie, John J. Harrington, Thomas G. McLin, J. W. Wills and Franklin Johnson.

All applications having been approved by the Board of Directors, Dr. Gorsline moved that the rules be suspended and the Secretary instructed to cast the unanimous ballot of the Society for Doctors Leslie, Harrington, McLin, Wills, and Johnson for membership. The Secretary cast 25 ballots, and declared the doctors named elected to membership.

Applications for membership from Doctors Evelyn O. Nielson, W. H. Nielson and W. H. Snyder were read and referred to the Board of Directors.

There being no further new business, Dr. George Hafford introduced the speaker, Dr. Grover C. Penberthy of Detroit, who discussed in a very interesting manner, "Infections of the Hand and Their Surgical Treatment." Discussion was opened by Dr. Brainard, followed by Doctors Gorsline, Kingsley, Hafford and Church. Dr. Kingsley moved that a vote of thanks be given Dr. Penberthy for his interesting talk. Supported and carried.

The meeting then adjourned to the dining room, where the members were joined by their ladies at a banquet.

Following the banquet Mr. A. L. Miller gave a very enjoyable talk on the development of ethics in journalism. The meeting then adjourned to the Bridge room, where the balance of the evening was spent in dancing. Attendance at the meeting, 25; at the banquet, 85.

GOGEBIC COUNTY

I wish to submit the following report, which is really a report for two months:

The regular monthly meeting of the Gogebic County Medical Society which was to have been held in the new Town Hall at Ramsay, on December 12, 1924, was indefinitely postponed, owing to the practically impassable condition of the roads, due to the unusually severe snowstorms of a few days previous.

A special meeting of the Gogebic County Medical Society was held at the Olcott school at Bessemer, Mich., December 15, 1924, at 8 p. m. This meeting was called for the purpose of making plans for suggestions to be submitted to the County Board of Supervisors, relative to using a part of Grand View hospital at Ironwood, as a general hospital. After expressions of the various members present of their respective opinions as to the feasibility of the plans discussed, a committee was appointed by the chair consisting of Doctors O'Brien, Houghten, Larson, and they to draw up resolutions to be presented to the Board of Supervisors embodying the opinions voiced by the members present at this meeting. A special meeting was decided upon to be held as soon as this committee had its report ready.

The regular monthly meeting of the Gogebic County Medical Society was held at the Elks' Club, Ironwood, at 8:30 p. m. It was decided to combine the regular monthly meeting with the special meeting which was to be held for the purpose of hearing from the committee appointed on December 15, regarding the use of a portion of Grand View hospital at Ironwood as a general hospital. This action was taken in view of the extremely uncertain weather conditions prevailing in this section at present. Briefly, the recommendations made by the committee were that the second floor of the present hospital be used as a general hospital, that

a training school for nurses be established in connection with the hospital, that an interne be secured, and that these things in addition to equipping the operating room and securing a motor ambulance, would be all that would be necessary in making the hospital suitable as a general hospital. It was unanimously decided that the Secretary send a copy of the communication drawn up by the special committee to the Chairman of the County Board of Supervisors.

Dr. Stebbins, of Ironwood, read an interesting paper on the subject of "Feet."

The special committee appointed by the President for the purpose of investigating the right of a certain optometrist in Ironwood to calling himself "doctor," made its report. The committee was given additional time to continue its work.

It was decided that the County Society dues for the coming year be \$1.00, in addition to the State dues of \$10.00.

The next meeting is to be held at the County Sanitarium on February 13, papers to be given by Doctors Draper and Dorpat, of Ironwood.

I would be glad to know, Doctor, whether a report is to be sent in for a month during which no regular meeting has been held.

M. J. LIBERTHAL, Secretary-Treasurer.

BERRIEN COUNTY

In the last number of The Journal of the Michigan State Medical Society on Page 59, "Our Deceased Members," I note that there was no mention of the death of Dr. F. L. Sharrer of Benton Harbor, which occurred on May 24, 1924. Dr. Sharrer was second vice-president of the Berrien County Medical Association and so also a member of the State Society.

At the meeting of the Berrien County Medical Society held in Niles at the time of the Post-Graduate Medical Conference the following officers were elected:

President, R. N. Dunnington, D. D., Benton Harbor, 1st vice-president, Abby Henderson, M. D., Niles; 2nd vice-president, R. B. Howard, M. D., Benton Harbor; secretary-treasurer, H. O. Westervelt, M. D., Benton Harbor; delegate to the State Society, Robert Henderson, Niles; alternate, Robert H. Snowden, M. D., Buchanan.

I am sending you this report as I do not know as the new Secretary has notified you of the changes.

Yours Fraternally,

R. B. HOWARD.

OAKLAND COUNTY

I am sending you a report of our annual meeting and two new members, annual meeting held at Board of Commerce, Nontiac, Michigan, December 30, 1924.

Officers for year, 1925: Dr. N. B. Colvin, president, Pontiac, Mich.; Dr. I. H. Neff, vice-president, Birmingham, Mich.; Dr. L. F. Cobb, secretary, Pontiac, Mich.; Dr. M. B. Mitchell, treasurer, Pontiac, Mich.; directors, Dr. R. Y. Ferguson, Dr. A. C. Murtha, Pontiac, Mich.; Dr. J. S. Morrison, Royal Oak, Mich.; delegate to State convention, Dr. F. B. Gerls, Pontiac, Mich.; alternate, Dr. F. B. Mercer, Pontiac, Mich.

A library committee was appointed for the purpose of establishing a medical library as a part of the Pontiac City library. Applications of Dr.

George Alexander, Pontiac, and Dr. Charles Long, also of Pontiac, Mich.

Both applications had been passed upon by the Board of Directors, and were accepted by the Society.

Motion made and passed that Oakland County extend a vote of confidence in Dr. Warnshuis, a committee of three was appointed to confer with the local Visiting Nurses association on matters of ethics. Meeting adjourned.

I can see no reason why you cannot count on us to a man, we're with you and will give all possible help from this part of the State.

LEON F. COBB, Secretary.

MUSKEGON COUNTY

The Muskegon County Medical Society held its annual meeting the evening of December 19th. Following the disposition of routine business, the members listened to an excellent paper on Caesarian Section, by Dr. G. J. Hartman. The paper was freely discussed.

The meeting was adjourned after the election of the following officers:

President, Dr. R. I. Busard, Muskegon; vice-president, Dr. C. J. Durham, Muskegon; secretary-treasurer, Dr. P. S. Wilson, Muskegon Heights; delegate, Dr. F. W. Garber, Sr., Muskegon; alternate, Dr. S. A. Jackson, Muskegon; medico-legal advisor, Dr. G. L. LeFevvre, Muskegon.

P. S. WILSON, Secretary.

CLINTON COUNTY

I am herewith submitting the names of new members of the Clinton County Medical Society elected at its annual meeting held at the Masonic Temple on Nov. 2, 1924. The officers are:

President, Dr. W. M. Taylor, Ovid, Mich.; vice-president, Dr. F. E. Luton, St. Johns, Mich.; secretary-treasurer, Dr. T. Y. Ho., St. Johns, Mich.; chairman program committee, Dr. A. O. Hart, St. Johns, Mich.

THOS Y. HO, Secretary-Treasurer.

INGHAM COUNTY

The annual meeting of the Ingham County Medical Society for the year 1924, held at Hotel Downey, December 19, 1924, at 4:30 p. m., was called to order by Dr. McIntyre. The minutes of the last meeting were read and approved.

The following Committee Reports were presented to the Society:

1. Executive Committee—No report.

2. Program Committee—Dr. Shaw gave a very complete report on the activities of the Society during the past year, which included 19 scientific programs, a dinner dance, and the annual picnic. Several joint meetings were held with the County Bar Association and the Dental Society. Dr. Shaw recommended the encouragement of the reading of papers by our own members and also that the program committee be allowed a reasonable amount to pay the expenses of outside speakers. He also recommended that occasionally during the year, some of the best known doctors of the country be invited to address our Society.

A motion was made and supported that the report of the Program Committee be accepted. Motion carried.

3. Entertainment Committee—No report.

4. Medico-Legal Committee—No report.

5. Legislative Committee—Dr. Davey gave a short oral report in which he mentioned the likelihood of legislation pertaining to the chiropractors, in the present session of the legislature. He strongly advised each member of the Society to get in touch with their state senator or representative, and use their influence to the fullest extent in lining up the men against quack medicine.

6. Public Health Committee—No formal report was given, but Dr. Olin mentioned the fact that 43 chiropractors had been prosecuted in the past year.

7. Welfare Committee—No report.

8. Committee on Ethics—No report.

9. Advisory Committee—No report.

10. State Medical Library Committee—Dr. A. F. Owen, as Secretary of the Committee, read a report in which he described the establishment of the library and also read a list of one hundred current periodicals which had been subscribed to and placed in the library. Dr. Owen emphasized the good fortune which had befallen the Ingham County Medical Society in having the benefits of a library of this type. He also requested that each member submit a list of books, which he will donate to the library, to the Secretary of the Society, who will in turn place the list in the hands of the library committee. It was also requested that the library committee be made a permanent affair. The library at present is open from 8 a. m. to 5 p. m. and negotiations are being made whereby it will be open evenings.

A motion was made by Dr. A. E. Owen and supported by Dr. Davey that the Society vote its thanks to Dr. Olin and the Health Department for their work in making the medical library possible and that resolutions of appreciation be drafted and forwarded to Dr. Olin. Motion carried.

11. Report of Special Finance Committee—A report was read by Dr. Milton Shaw in which he outlined the previous expenditures of the Society and drew a comparison with what they would be for the year 1925. He announced that the fee for each member to be paid to the State Society had been increased to ten dollars and for this reason, and also because of the increasing size of the society, he recommended that the dues be increased to twenty dollars per year.

A motion was made by Dr. Karl Brucker and supported by Dr. Galbraith that the report of the special Finance Committee be accepted. Carried.

Election of New Members—The petitions of Dr. J. J. Henderson of Fowlerville, Mich., and Dr. C. D. Sargeant of Lansing, Mich., were submitted for vote.

A motion was made by Dr. Toles that the petitions be accepted and the applicants admitted to membership. Motion carried.

Treasurer's Report—Dr. Wershow read the report of the Treasurer and exhibited a schematic chart showing the various amounts expended during the year.

A motion was made that the report be accepted. Motion carried.

Election of Officers for 1925—A motion was made that Dr. Wight be given the unanimous vote of the Society for President. Motion carried.

Vice-President—Nominations:

1. Dr. Fred Seger.

2. Dr. Wm. McNamara.

3. Dr. Bartholomew.

A motion was made that the nominations be closed. Carried. Result of ballot:

Dr. Seger	21 votes
Dr. McNamara	5 votes
Dr. Barthalomew	15 votes

Secretary-Treasurer—Nominations:

1. Dr. Horace L. French.

A motion was made by Dr. Milton Shaw and supported by Dr. DeVries that the nominations be closed and the Secretary instructed to cast a unanimous ballot for Dr. French. Motion carried.

Delegates—Unanimous ballots were cast for the following delegates:

1. Dr. Davies.
2. Dr. Toles.

Alternates.

1. Dr. Bruegel.
2. Dr. Osborn.

Medico-Legal Member.

1. Dr. Barthalomew.

A motion was made and supported that the meeting be adjourned. Motion carried.

Horace L. French,
Secretary.

December 19, 1924.

The Ingham County Medical Society held its annual banquet December 19, 1924, at 7 p. m., in the main dining room of the Hotel Downey. The banquet room was attractively decorated through the genius and work of Mrs. DeVries, assisted by Mrs. McIntyre and Mrs. Welch. The cuisine was excellent and thoroughly enjoyed by every one present.

During the banquet a very enjoyable musical program was given by the Gefranzon Trio.

After the banquet the retiring president, acting as toastmaster for the evening, introduced himself and gave the President's address. Dr. McIntyre outlined the work that had been done by the Society during the year and made several recommendations for the future work of the Society.

The newly elected officers were then called upon and a short talk was given by each, following their introduction to the Society.

The next number was some selections by the Ingham County Medical Choral Onions, with Dr. Drolette acting in the capacity of choir master.

Mrs. Drolette next gave a very interesting talk concerning "Some Doctors I Have Known." Needless to say, the crowd indulged in many good laughs at the expense of the doctors who were fortunate enough to come within Mrs. Drolette's scope of acquaintance.

The alumni of the University of Michigan who were present were next very tactfully brought into the limelight and under the direction of Dr. Harold Miller, executed several Michigan songs.

"Some Patients I Have Known," was the subject presented by Dr. Osborn, who was next on the program, and provided genuine amusement for those present. We could easily see that Dr. Osborn is an ardent disciple of Dr. Fishbein and his tonics and sedatives.

Two songs by Mrs. Joseph W. Stack, with Mrs. Weinburgh accompanying, came next and were greatly enjoyed and appreciated.

Dr. Green of Hillsdale, the Councilor for the Second District, was next introduced and gave a short talk.

The main speaker of the occasion was the Hon.

Gilbert A. Currie of Midland, Mich., who gave a very interesting talk on "Modern Chemistry and Its Relation to Medicine." Mr. Gilbert is connected with the Daw Chemical Company of Midland, and was able to give us some very good information concerning commercial chemistry.

Mr. Currie's talk concluded the program and every one felt that the 1924 annual banquet had been a great success.

Horace L. French,
Secretary.

THE ANNUAL REPORT OF THE PRESIDENT AND SECRETARY OF THE INGHAM COUNTY MEDICAL SOCIETY FOR THE YEAR 1924

The Ingham County Medical Society closes its year of 1924 with a feeling that it has enjoyed a fairly active and instructive year. Our membership has grown in numbers, which now should be also converted into a potential force for the good of the Society and the local profession.

Membership Report—

Active members at the beginning of the year, 74.

New members admitted during 1924, 16, making a total of 90.

Honorary or life members, 2.

Members lost through death during 1924, 4.

Lost for non-payment of dues, 2.

Lost through transfer or removal, 3.

Program—We were very fortunate in having a Chairman of the Program Committee who was active and efficient. Through his efforts we averaged better than two meetings per month. We had some excellent presentations of papers and clinical demonstrations, as well as original experimental work. The program was varied, of practical importance and very instructive.

A complete list of the entire program is printed on the leaflet which you will find at the banquet table.

We had sixteen scientific meetings and three scientific programs combined with the dentists, and one joint meeting with the lawyers.

Combined Meetings—The joint scientific meetings with the other professions, such as the dental profession, the legal profession, and other scientific organizations, brings us in closer touch and better understanding between the members of the several professions. During the past year we had three very instructive and interesting meetings with the dental group of this district. These meetings were well attended by both groups.

We also had a successful meeting and dinner with the lawyers, at which time Dr. Barret of Ann Arbor presented a very remarkable discussion of the "Behavior Problem," which was of mutual as well as general interest.

Last February, through the informal interests and efforts of a committee of ladies, headed by Mrs. McIntyre, the doctors, dentists and druggists enjoyed a social evening at the Country Club. This affair was in the nature of a dinner-dance. There was a large attendance from the three professions. From all indications it met with very favorable criticism. These social evenings are conducive to a better fellowship and closer feeling among the several professions whose interests and ideals are somewhat similar. It is hoped that similar social evenings may be held in the future and properly supported.

Annual Picnic—This was held this year late in September. We were fortunate in having an ideal

day for the event. We had a fairly good turn-out for the steak roast and all arrangements were carried out smoothly. However, this annual function should be staged early in the summer, when weather conditions are more stable.

Through the interruption of the small pox epidemic we had to forego the pleasure of an invitation for a joint picnic with the lawyers at Judge Wiest's farm.

Civic and Public Health Activities—

State Department of Health—Ingham County is unusually fortunate to be situated in close proximity to the State Board of Health Laboratories. The officers of the State Board of Health are to be commended for their co-operation and interest in helping the practitioner with the laboratory phase of diagnosis, practically without any fee. We urge that every member avail himself of the laboratories and thereby improve the character of his work, and co-operate with the State Board of Health in their problems. The Society as a unit has appreciated the value and co-operation of the Health Department.

Library—Another feature of the State Health Department is the medical library. The department has designated its intention to co-operate with the County Society in starting a collection of medical books and periodicals. This effort should be encouraged and supported by each member. It would certainly be a great convenience for our members to have an adequate collection of medical literature to be used as a reference library. If properly utilized it would greatly enhance our work. The County Society should appropriate an annual substantial sum from its budget towards the library. One hundred dollars a year would not be too much. In this connection it may be suggested that many of our own members donate some of their personal library or bequeath their personal collections to this library. In other words, remember this library in your will.

Small Pox Epidemic—On the occasion of the small pox epidemic the Society and its individual members responded to the call of health officers and gave of their time in checking the epidemic.

Cancer Week—The Ingham County Medical Society, through its appointed committees, has taken an active interest in the problem of cancer control. During Cancer Week free cancer clinics were held daily under the auspices of the Society. Newspaper publicity was utilized in advertising the clinics. The clinics were well attended and managed. In this work Sparrow Hospital furnished the necessary assistance. Seventy-nine patients were seen in the clinics during the week.

The State Society—The annual state meeting was held at Mt. Clemens. There were a number of Ingham County men there, but far too few, considering the value of the wonderful papers presented at the meeting. This year's meeting offered a wonderful program of scientific papers on many important problems. The state meeting is probably the most important event in the life of the medical profession and should be attended by every progressive physician. The County Society could do a great deal in encouraging its membership to attend. A special committee on attendance could be appointed and this committee should canvass the individual members and organize automobile parties who could travel together.

The annual meetings are stimulating and instructive and tend to maintain one's interest in the ethical and scientific aspect of the practice.

Defense Day—Along with the other civic organiza-

tions the Society participated in the National Defense Day exercises.

Rotary Clinic—The Society accepted the invitation of the Rotary Club to conduct the Orthopedic and Neurologic clinic. This clinic was held at the Sparrow Hospital, Dr. Kidner from Detroit conducting the orthopedic clinic, and Dr. Clingman from Ann Arbor conducting the neurologic clinic, the members of the Society assisting. In fact, we think the Medical Society should have received more credit than was given it. The members of our Society, we believe, did the bulk of the work. All cases were thoroughly worked up and complete histories taken of the cases before they were turned over to the visiting physicians, who acted more in the capacity of consultants.

Co-operation of the Hospitals—The two local hospitals have been unusually eager to extend the facilities of the hospitals to the County Society. We held one scientific meeting at Sparrow Hospital and a number of meetings at St. Lawrence. The hospitals are excellent places for such meetings, inasmuch as we can utilize equipment, such as the X-ray, stage clinics or demonstrate any clinical procedure or laboratory test. Both hospitals should be given a vote of thanks by the Society for their splendid co-operation and generous hospitality. It was the aim of the Secretary to divide the meetings between the two hospitals, but unfortunately Sparrow Hospital has but very limited facilities and quite inadequate for our meetings, even if we have only 50 per cent of our membership in attendance. St. Lawrence Hospital planned their building wisely, having a room that is especially adapted to our needs. This room is sufficiently large to accommodate practically our entire membership. The Sisters have left nothing undone to make our meetings pleasant and complete.

Meeting Places—However, the Society has had to meet at various places; the Elks Club, Kerns Hotel, Downey Hotel and the State Department of Health. Therefore it is our opinion that an organization of this size with a growing membership should make some effort to furnish some permanent meeting place, properly equipped for the needs of the Society. In this place the library could be housed for the convenience of the members. There are many societies that have their own quarters. In several cities the medical academies have a large room in the city public library for the convenience of the medical profession. The library keeps the books properly catalogued and the room is only open to registered physicians. It may be possible for our Society to exert its efforts in this direction. We might say in passing that this would be a wonderful opportunity for some wealthy and philanthropically inclined citizen or citizens to perform a great and lasting service, not only to the medical profession of today, but to the younger physicians who will follow us. A permanent place of this kind would greatly facilitate our work.

Before leaving the subject of hospitals we wish to emphasize the fact that in our opinion the public has not been sufficiently informed concerning the new obstetrical departments of our two hospitals. We believe it to be the duty of every physician to practice what he believes about asepsis. We believe that every uterus that is opened by mechanical means or by nature is a major operation and that the mother and baby should have the advantages of hospitalization with all the modern facilities contained therein. In other words, the general surgeon who operated ten years ago in the home, believes it is now unwise to open an abdomen unless in the well equipped operating room of the hospital, why should we expect the mother to risk not only her own life, but that of her baby, under less favorable conditions? It is up to you,

Mr. Doctor, to urge and encourage your maternity patients to take advantage of the hospital.

Newspapers—At this time we wish to express our thanks to the State Journal and the Capital News for their hearty co-operation in giving us publicity, not only to our meetings and the report of same, but the various articles that have appeared in their columns that were of mutual benefit and service to the physicians and the public.

Also, we have arranged with the heads of the Sparrow and St. Lawrence Hospitals to render a free telephone exchange and information service for the convenience of the members of the Society and their patients. This service is to be rendered on Sundays and holidays when the physicians' offices are closed and there is no one at the residence to answer the phones. This service will be available from 8 a. m. until 8 p. m., and any information the physicians wishes given, i. e., if he is to be out of the city, time of his return, or any physicians designated to attend his patients, this or any other service possible will be rendered by the attendant of the telephone at either hospital.

Thorough publicity of the above plan has been promised by both newspapers. We would also suggest that each member of the Society keep his patients informed of this plan, as by so doing he will be rendering a service to both his patients and himself.

Clinical Clubs—Back in 1909 the Ingham County Medical Society did not boast so large a membership and the meetings were oftentimes few and far between, therefore we members of the city organized an auxillary of the County Society that was known as the Lansing Clinical Club. Each member of this club in turn prepared a paper based on an interesting case that had at some time occurred in his practice. These papers were discussed and created a great deal of interest due to the fact that they were not obsolete cases or those occurring in distant localities, but those actually occurring in Lansing and vicinity. This club, due to some reason unknown to the writer, was eventually discontinued, but we are pleased to state that during the past year a new club has been formed which is also an auxillary of the Medical Society with practically the same purposes and ideals of the old Lansing Clinical Club. The new club is known as the Study Club, and due to the active and enthusiastic co-operation of its members, has produced some wonderfully prepared and intelligently discussed papers, some of which, in our opinion, should be presented as often as possible to the entire Society.

We also recommend that a monthly or quarterly bulletin be printed by the Society, same to be edited and published by a committee appointed by the President and known as the Editorial Committee. This bulletin should publish the work of the Medical Society and Study Club, which would be very instructive to our members, especially to the county members outside of Lansing, who are unable to attend every meeting.

Attendance—Our average attendance for most of our meetings has been very poor, considering the membership of 100 we hardly averaged 30 per cent attendance. A few of our meetings were attended by as many as 40, but at most of the meetings there were but 25 or 30. This lack of interest is deplorable. Our scientific programs are designed for the busy practitioner who finds it difficult and costly to get away to study at some distant clinics. Our programs are in the nature of a post-graduate course for the enlightenment of our membership. It is usually scheduled at such time as will least conflict with our

practice. They are held sufficiently infrequent as not to be boresome. It seems that our meetings, by virtue of being scientific and instructive, could command priority over all other meetings or interests, since they are aimed to make us better physicians. The strangest part of it all is the fact that those who attend regularly and show the greatest interest in the programs are those who do get away to other places and do post-graduate work. There are many members in our Society who have never attended a single meeting during the entire year. They have simply paid their dues and nothing more.

The Society should impose some obligations upon its passive members in return for the prestige which membership in this Society implies. It should stand for something more than mere payment of dues. In our opinion some rule should be adopted whereby a member is automatically suspended who shows a persistent lack of interest in the advancement of the profession and the fellowship of his colleagues. Every member should cultivate the spirit of give and take.

On the other hand, we believe also that the Medical Society owes a duty to its individual members, a duty which should be faithfully discharged. For example, in the not too distant past there have been several of our members who have had some friction with the hospitals. Now then, instead of taking a passive attitude and letting these misunderstandings, you may call them, go by default, uncorrected, let us encourage our members to bring their troubles, or problems, if you please, to the attention of the officers or executive committee of this Society, and give him, as well as his opponent, a fair and impartial hearing. If he is guilty he should be disciplined. If not, he should receive the unanimous support of this Society to correct the existing conditions. In other words, we believe that we owe our members more than an over-stuffed diet of brain food in the form of scientific papers and discussions. Don't lose sight of the fact that the physician has a body and soul as well as other people, and that in his daily practice he has problems to solve other than scientific ones. We also believe that it is high time that the honest patient should not be obliged to pay the doctor bills of the professional deadbeat, because, irrespective of the moral side of the question as to whether it is right or wrong, we maintain that it is not necessary, due to the fact that our charitable organizations are well established. We have a full time city and county physician, free clinics, of which the staff of both hospitals, which are made up of our members, give freely of their services without one penny of remuneration. Therefore we believe that if we establish a central clearing house or bureau and turn in all unpaid doctors' bills to this bureau, we could soon eliminate the professional deadbeat, or drive him into the line of charitable medical services where he belongs. This, gentlemen, we believe is only fair to the honest patient and his physician.

Conclusion—In conclusion we wish to express to the chairman and members of our committees and to each individual member of this Society, our deep appreciation and gratitude for their diligent service, hearty co-operation and loyal support given this administration. We thank you.

J. Earl McIntyre, M. D.,
President.

Max Wershow, M. D.,
Secretary.

Lansing, Mich., Dec. 19, 1924.

Among the Books

A Review and Frank Appraisal of Medical Books That are Proffered to the Profession by Publishers.

OPERATIVE SURGERY—Vol. IV., final volume, by Warren Stone Bleckham, M. D., F. A. C. S. In six octavo volumes, 5,400 pages, 6,318 illustrations, and Desk Index Volume. Cloth, \$10. W. B. Saunders Company, Philadelphia.

This is the final volume of a system that becomes a standard work on surgery. It presents modern surgery, surgical diagnosis and pathology in the full light of our present knowledge. In surgical treatment and operative technic it is thorough, clear and accurate. The illustrations are pertinent and enhance the text. We know of no other so complete a text while at the same time serving so satisfactorily as a reference and consultant. The entire system is a credit to the author, publisher and American surgery.

CHLORIN IN RESPIRATORY DISEASES

When the announcement first appeared in The Journal, last March, that Vedder and Sawyer of the Army Medical Corps had been able to devise a method for administering chlorin, in the treatment of respiratory diseases, which seemed to have a distinctly beneficial effect in this class of ailments, it was received with exceptional interest. This interest was stimulated, no doubt, by the fact that high officials of our government, including even the President of the United States, had submitted to treatment by this method and had expressed satisfaction with the results. Immediately, individual physicians, as well as hospitals and health departments, undertook to test chlorin administration on a large scale, with a view to establishing finally its actual adequacy. In New York City, Health Commissioner Monaghan established two clinics under the direction of Dr. L. I. Harris, in charge of the Bureau of Preventable Diseases. These clinics began active work, June 1, and continued until August 1. The results of the experiment have just been made available through the health bulletin of the Department of Health of the City of New York. According to the report, only 6.5 per cent of 506 persons with varicous respiratory diseases reported themselves as cured, in contrast to 71.4 per cent of 931 persons reported cured in the original paper of Doctors Vedder and Sawyer. Fifty-three per cent of the patients treated by the New York clinics reported improvement, but the physicians in charge do not attach much importance to such reports, since it is well known that patients with minor respiratory infections tend to improve, within certain limitations, by the very nature of such diseases. As is mentioned, the report of the New York investigators concerns only acute cases, and the conclusion is that in such instances at least the claims are unjustified. Much has been said of the use of the method in whooping cough, but eighteen cases of this disease studied with twelve controls failed to show any appreciable advantage of the chlorin method of treatment over that previously used. The method was without apparent benefit in asthma and in hay-fever; indeed, three patients with asthma became decidedly worse under treatment. The results of this controlled investigation are, therefore, such as to depreciate definitely the claims originally made for the method by the Army medical investigators. The physician is confronted with a situation in which the

original investigators, whose work seems to have been conducted in a scientific manner, report excellent results which other investigators working independently have failed to confirm. Obviously, the results of numerous investigations being made elsewhere must also be brought to light before any opinion is warranted as to the future of this method of treating disease. Certainly the individual physician who purchases such apparatus and uses it in his practice must do so with the distinct understanding that he is using an unestablished method.—*Jour. A. M. A.*, Dec. 6, 1924.

HELIO THERAPY IN THE TREATMENT OF GENITO-URINARY TUBERCULOSIS

Nelson A. Myll, Denver (*Journal A. M. A.*, Dec. 6, 1924), holds that genito-urinary tuberculosis, like bone, joint and other complications of general tuberculosis, is a local manifestation of generalized tuberculosis, and that treatment, to be curative and permanent, must be directed toward the disease, rather than to a local manifestation of the disease. The removal of an epididymis or of a testis, or the draining of a tuberculous prostate cannot, in itself, be curative, even if the local pathologic condition has not all been eradicated. Heliotherapy is the method of treatment carried out in cases of genito-urinary tuberculosis at the hospital, with which Myll is connected. Heliotherapy is begun at once, according to the Rollier method. The feet and ankles are exposed to the direct sunlight for ten minutes the first day, five minutes anteriorly and five minutes posteriorly. The second day the exposure is increased five minutes both anteriorly and posteriorly half way up to the knees, thus giving a total of twenty minutes' exposure and so on, approximately an equal distance of surface except the head is sunned. The ten minute increase is continued until about two hours' radiation is taken in the summer and three hours in the winter. The total time will vary somewhat with the individual. Particular attention must be paid to exposing the genitals, and the site of the active inflammation must receive direct radiation. The patient wears no clothes while taking the sun. When not sunning, the patient is encouraged to wear as little clothing as possible, to give him the maximum benefit of air baths. If several sunless days occur together, artificial light therapy is substituted. Rest, the one great therapeutic agency, which is of greatest value in the treatment of tuberculosis, is almost ideally procured in this treatment. These patients are in bed practically all the time, and physical relaxation is almost constant. The diet is the regular hospital diet. Since last November Myll has been using, as a routine, the intravenous administration of calcium chlorid, 5 c.c. of a 5 per cent aqueous solution every five days. In all cases in which there was bladder irritation, there was an almost immediate symptomatic improvement. Painful urination was greatly lessened or ceased entirely, probably through the action of calcium chlorid in relaxing the smooth muscle spasm. The only treatment employed is removal of free pus in cases in which the lesion is superficial and easily accessible. Fourteen cases have been treated with heliotherapy; and the results have been uniformly encouraging. In no case has there been an extension of demonstrable disease after treatment has been begun, and in every case except one, this patient being a full blooded Indian, there has been a steady clinical symptomatic improvement after the initial symptomatic aggravation during the first few weeks of treatment. Heliotherapy arrests the progress of pathologic change and seems to promise cure of tuberculosis of the genito-urinary tract.